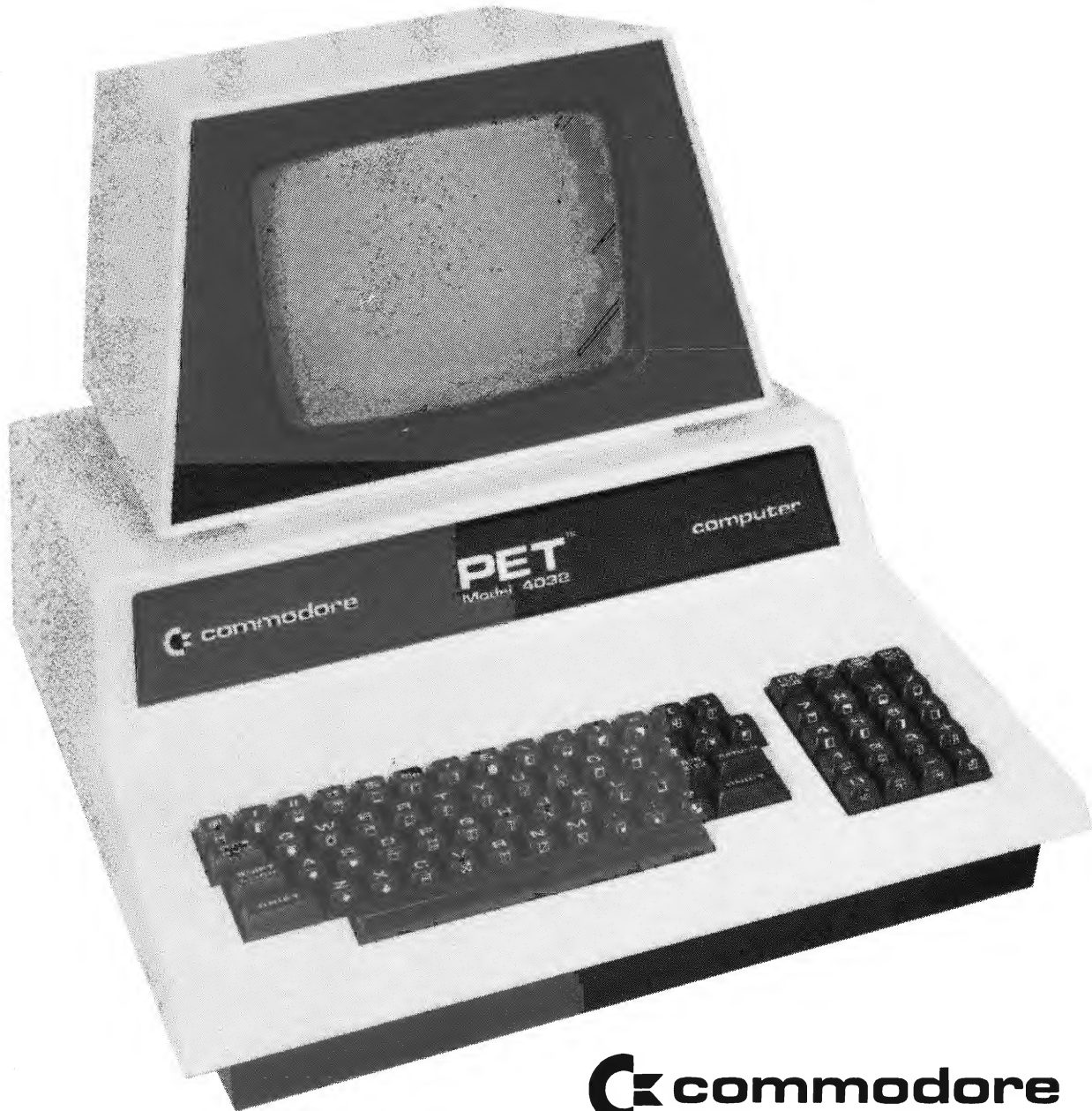

Commodore 4000 Series

Technical Manual

Model 4016/4032



 **commodore**
COMPUTER

These documents are for repair service information only. Part numbers are for reference only. Only parts on current dealer parts list are available. No license is given for any use by possession of these documents and may not be reproduced in any form without the written approval of Commodore Electronics Limited.

PART NO.	DESCRIPTION
8032090-01	UNIV. DYNAMIC PET 8032-60HZ
-03	4032-60HZ (12")
-05	4016-60HZ
-07	UNIV. SUPER PET 9000 - 60 HZ
-09	UNIV. SUPERPET, COMBO-BRD 9000 - 60 HZ
8032090 - 11	UNIV. DYNAMIC PET, 4032-9" - 60 HZ

9 REWORK INSTRUCTIONS FOR FCC: JUMPER WIRE FROM UD3 PIN 1 TO UB14 PIN 35. USE 22 AWG (IT.108). THIS CONFIGURATION IS FOR -09 & -10 ONLY.

8 UD11 & 12 NOT FOR -07, -08, -09 & -10

7 IDENTIFY WITH APPLICABLE DASH NO.

6 SOLDER TO XTAL AND PCB.

5 FOR ITEMS 118 & 119, ALL ASSEMBLIES MUST HAVE SAME VENDOR.

4 SOLDER JUMPER, ITEM 106 FROM E1 TO SILVER CONTACT ON MT1, ITEM 73; TAKE CARE TO ALLOW NO MORE THAN ONE SECOND DURATION FOR APPLICATION OF HEAT DURING SOLDERING.

LTR	ZONE	DESCRIPTION	DATE	APPROVED
A		PRODUCTION RELEASE	6/23/81	11/2/81
B		REV PER ECO 2157	7/16/81	11/2/81
C		REV PER ECO 2172	8/6/81	11/2/81
D		REV PER ECO 2237	9/2/81	11/2/81
D		REV PER ECO 2308	9/23/81	11/2/81
E		REV PER ECO 2368	10/1/81	11/2/81
E		PER ECO 2414	10/1/81	11/2/81
F		REV PER ECO 2565 & 2555	11/2/81	11/2/81
G		REVISED PER ECO 2887		
H		REVISED PER ECO 3027		

11 CUT PINS 9 & 10 AT UE7.
CONNECT PIN 9 TO GND.

10 CONNECT ITEM 43 FROM PIN 15 OF UA19 TO VCC (+5V).

4 REFER TO PART SUBSTITUTION INDEX, P/N 321233.

3 SOLDER AT 3 PLACES, EQUALLY SPACED AROUND THE BRASS BASE MT1 (ITEM 73)

2 IDENTIFY WITH APPLICABLE DASH NO.

1. SHEET 6 OF 7 SIZE C, SHEET 7 OF 7 SIZE D.

NOTES: UNLESS OTHERWISE SPECIFIED:

commodore	TITLE: PCB ASSY - UNIV. DYNAMIC PET
-----------	-------------------------------------

DRAWN BY M. Chen	DATE 3-11-81	ENGR APPR. 11/2/81	SIZE B	DRAWING NUMBER 8032090
CHECKED BY M. Chen	DATE 6-17-81	APPR. 11/2/81	SHEET B	OF 7

QUANTITY REQD PER PART / DASH NO.										ITEM	Q	PART NUMBER	DESCRIPTION	REF DES	BEND	NOTES
11	10	09	08	07	06	05	04	03	02							
1	1	1	1	1	1	1	1	1	1	1	D	8032088-01	FABRICATION-UNIV. DYNAMIC PET			
2	2	2	2	2	2	2	2	2	2	2	D	8032087-01	LOGIC DIAGRAM-UNIV. DYNAMIC PET			
3	3	3	3	3	3	3	3	3	3	3	B	901640-01	IC 2332	UA3		
4	4	4	4	4	4	4	4	4	4	4	B	901521-01	74LS00	UD5,UE5,UE11		
5	5	5	5	5	5	5	5	5	5	5	B	901521-24	74LS10	UD4,UE7,UE13		
6	6	6	6	6	6	6	6	6	6	6	B	901522-20	7425	UE14		
7	7	7	7	7	7	7	7	7	7	7	B	901521-02	74LS04	UE15		
8	8	8	8	8	8	8	8	8	8	8	B	901523-01	LM555	UD16		
9	9	9	9	9	9	9	9	9	9	9	B	901522-01	7417	UD15		
10	10	10	10	10	10	10	10	10	10	10	B	901435-01	6502	UB14		
11	11	11	11	11	11	11	11	11	11	11	B	901479-01	CRT CONTROLLER	UB13		
12	12	12	12	12	12	12	12	12	12	12	B	901522-13	74154	UE12		
13	13	13	13	13	13	13	13	13	13	13	B	901436-01	6520	UB12,UB16		
14	14	14	14	14	14	14	14	14	14	14	B	901524-01	MC3446	UA20,UB17,UC12		
15	15	15	15	15	15	15	15	15	15	15	B	901437-01	6522	UB15		
16	16	16	16	16	16	16	16	16	16	16	B	901521-09	74LS145	UC11		
17	17	17	17	17	17	17	17	17	17	17	B	901521-45	74LS393	UD3,UE6		
18	18	18	18	18	18	18	18	18	18	18	B	901521-21	74LS02	UD1		
19	19	19	19	19	19	19	19	19	19	19	B	901525-09	74574	UC1,UE1		
20	20	20	20	20	20	20	20	20	20	20	B	901525-01	74504	UD2,UE4		
21	21	21	21	21	21	21	21	21	21	21	B	901521-06	74LS74	UB2,UB1		
22	22	22	22	22	22	22	22	22	22	22	B	901522-28	74166	UA2		
23	23	23	23	23	23	23	23	23	23	23	B	901447-10	2316	UA3		
24	24	24	24	24	24	24	24	24	24	24	B	901521-32	74LS86	UC2	SEE NOTE 4	
25	25	25	25	25	25	25	25	25	25	25	B	901521-28	74LS164	UE3	SEE NOTE 4	
26	26	26	26	26	26	26	26	26	26	26	B	901521-16	74LS138	UC3		
27	27	27	27	27	27	27	27	27	27	27	B	901521-11	74LS157	UC8-UC10,UE2	SEE NOTE 4	
28	28	28	28	28	28	28	28	28	28	28						
29	29	29	29	29	29	29	29	29	29	29						
30	30	30	30	30	30	30	30	30	30	30	B	901465-22	2332	UD6		
31	31	31	31	31	31	31	31	31	31	31	B	901465-21	2332	UD8		
32	32	32	32	32	32	32	32	32	32	32	B	901465-20	2332	UD9		
33	33	33	33	33	33	33	33	33	33	33	B	901465-23	2332	UD10		
34	34	34	34	34	34	34	34	34	34	34						
35	35	35	35	35	35	35	35	35	35	35	B	901522-04	IC 7400	UE1		
36	36	36	36	36	36	36	36	36	36	36	B	900110-07	CAP. LOW LEAK. ELECT. 1uF 50V C10			
37	37	37	37	37	37	37	37	37	37	37	B	900461-28	CAP. CERAMIC AXIAL .1uF 50V C12-15,18,20-22,25-28,30-50,53,55-59,62-72,75,87,89,90,95,96			
TITLE: PCB ASSY-UNIV. DYNAMIC PET											DRAWN BY: CHKO:7/1/8					
commodore											DATE: 3-11-87					
											ENGR: 6/7/8					
											APPR:					
											REV: H					
											SIZE: B					
											8032090					
											H 2/7					

QUANTITY REQD. PER PART / DASH NO.				ITEM	PART NUMBER	DESCRIPTION	REF DES	QTY	NOTES
11	10	09	08						
	3	3	3	3	338 B	CAP, CERAMIC AXIAL .01uF 50V	C52, 60, 61		
	2	2	2	2	339 B	CERAMIC AXIAL .022uF 50V	C3, 4		
	1	1	1	1	40 B	ELECTROLYTIC 4700uF 25V	C5		
	1	1	1	1	41 B	ELECTROLYTIC 470uF 16V	C2		
	5	5	5	5	42 B	LOW LEAK. ELECT. 10uF 25V	C1, 16, 17, 23, 24	SEE NOTE 4	
	1	1	1	1	43 B	DIPPED MICA, RADIAL, 82pF, 500V	C97	SEE NOTE 10	
	2	2	2	2	44 B	TANTALUM 1uF 35V	C6, 51		
	2	2	2	2	45 B	ELECTROLYTIC 47uF 16V	C7, 11		
	1	1	1	1	46 B	CERAMIC AXIAL 220pF	C92		
	14	14	14	14	47 B	CAP, CERAMIC AXIAL 47pF	C74-C86, C88		
					48				
	2	2	2	2	49 B	RES, CARBON 1/4W 5%	IM R24, 25		
	3	3	3	3	50 B		470u R13, 16, 17		
	4	4	4	4	51 B		68u R10, 11, 46, 49		
	2	2	2	2	52 B		5.1K R19, 21		
	2	2	2	2	53 B		2.4K R18, 20		
	1	1	1	1	54 B		10u R8		
	2	2	2	2	55 B		10K R23, 27		
	2	2	2	2	56 B		1.5K R47, 48		
	8	8	8	8	57 B		100u R32-38, 40		
	1	1	1	1	58 B		4.7K R51		
	1	1	1	1	59 B		2.2K R53		
	2	2	2	2	60 B		47u R50, 52		
					61				
					62 B				
					63 B				
	1	1	1	1	64 B		39u R7		
	16	16	16	16	65 B		1K R1-6, 12, 15, 22, 26, 28, 39, 42-45		
	1	1	1	1	66 B	CARBON 1/4W 5%	3.3K R14		
	1	1	1	1	67 B	RES, NETWORK, DIP 14PIN	10K UB11		
					68				
	2	2	2	2	69 B	TRANSISTOR, TIP 29	Q1, Q2		
	1	1	1	1	70 B	TRANSISTOR, PACK Q2T2222	UE16		
					71				
					72				
	1	1	1	1	73 B	TRANSDUCER-PIEZO ACOUSTIC	MT1		
					74				

commodore

TITLE: PCB ASSY-LINIV. DYNAMIC PET

DATE: 7-11-81
CHKD: [Signature]
APPR: [Signature]

ENGRI: [Signature]

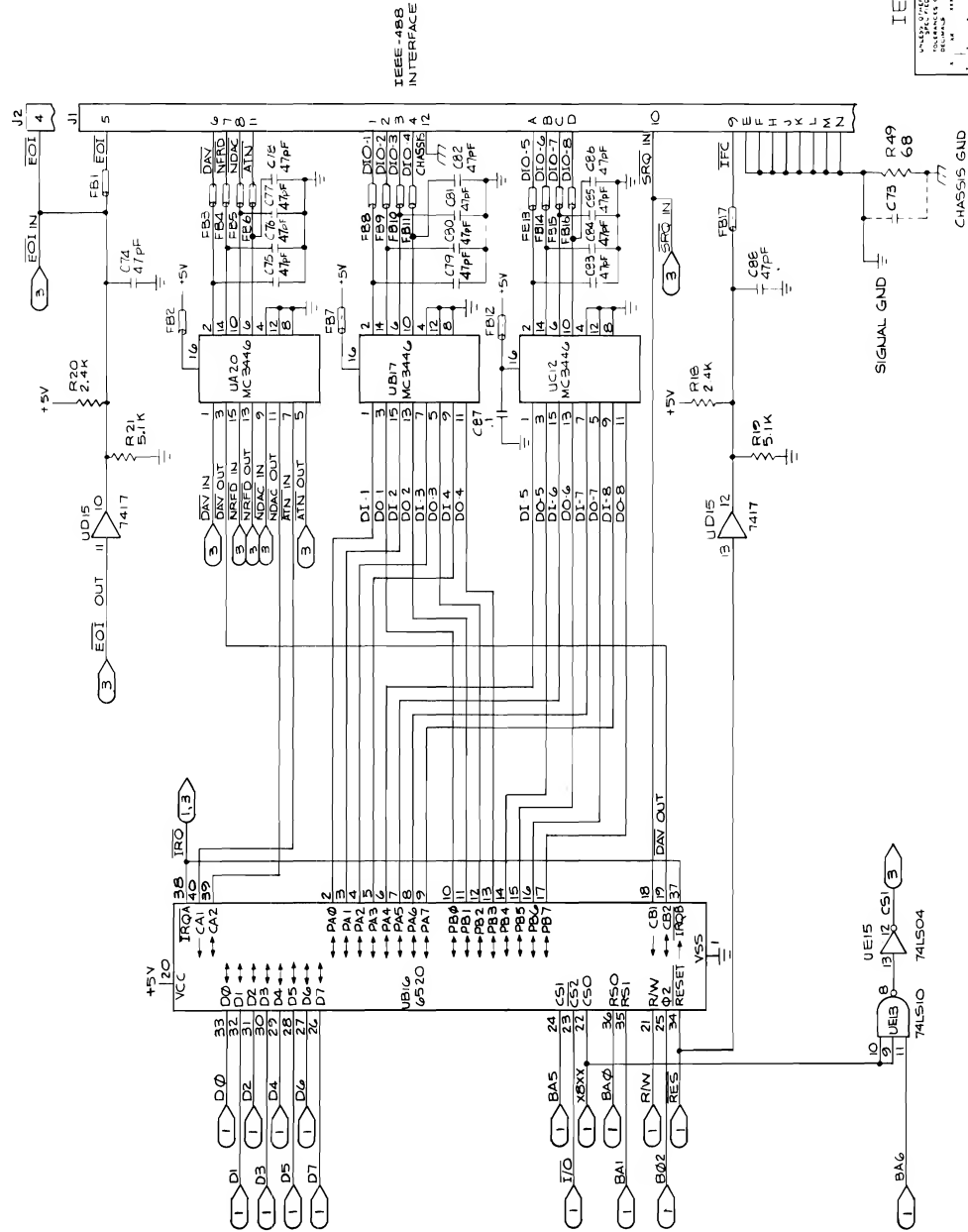
REV: H
SIZE: B
8032090

SHT: 3/7

QUANTITY REQD PER PART / DASH NO.				ITEM	8	PART NUMBER	DESCRIPTION	REF DES	BEND	NOTES
11	10	09	08							
				75						
				376	B	900750-05	DIODE, IN4005	CR1, 5.7		
				277	B	900757-01	BRIDGE 4A/50V	CR2, 4		SEE NOTE 4
				178	B	900753-01	IN5402 3A/200V	CR3		
				79						
				80						
				281	B	900941-01	DIODE, ZENER 7.5V	VR5, 6		
				82						
				183	B	901527-03	VOLTAGE REGULATOR, 7905, -5V/1.5A	VR1		TO-220
				84						
				185	B	901528-04	VOLTAGE REGULATOR, 7812, +12V/1A	VR2		TO-3
				186	B	901528-01	VOLTAGE REGULATOR, LM323	VR4		
				87						
				188	B	900556-02	CRYSTAL 16MHZ	Y1		
				89						
				190	B	903326-07	HEADER ASSY .100 CENTER J10			7 PIN; REMOVE PIN 3 AT ASSEMBLY
				291	B	903345-25	HEADER ASSY, DUAL ROW, 100 CENTER J4, 9			50 PIN
				192	B	903316-09	HEADER ASSY .156 CENTER J8			9 PIN; REMOVE PIN 7 AT ASSEMBLY
				193	B	903331-07	HEADER ASSY, POLARIZED, 100 CENTER J11			7 PIN; REMOVE PIN 3 AT ASSEMBLY
				194	B	903331-07	HEADER ASSY, POLARIZED, 100 CENTER J7			7 PIN; ORIENT OMITTED PIN TO PIN 6 POSITION
				195	B	903331-20	HEADER ASSY, POLARIZED, 100 CENTER J5			20 PIN; ORIENT OMITTED PIN TO PIN 19 POSITION
				96						
				497	B	904150-04	SOCKET, IC LOW PROFILE 24 PIN	UA3, UD7, UD11, UD12		SEE NOTE 8
				198	B	904150-06	SOCKET, IC LOW PROFILE 40 PIN	UB14		
				199		904150-01	SOCKET IC LOW PROFILE 14 PIN	UFI		
				200	B	901151-17	COIL, INDUCTOR 2.2uH	L1, L2		
				101	B	320086-02	BUS WIRE			
				102						
				4103	B	906403-19	RIVET, DOME HEAD, OPEN END			
				2104	B	906404-04	RIVET, DOME HEAD, CLOSED END			
				105						
				1106	B	903780-01	#30 WIRE WRAP WIRE, RED			
				20107	B	903781-01	22 AWG BARE WIRE ON TAPE #FEEL			
				-108	B	903755-03	WIRE, INSULATED, 22 AWG, 12.5 LG			
				1109	B	320268-01	HEAT SINK			
				41110	B	904907-01	HEAT SINK, COMPOUND THERMAL			
				111						
TITLE: PCB ASSY-UNIV. DYNAMIC PET								DATE: 1-11-87	ENG: 6-11-87	REV: H
commodore								DATE: 6-11-87	SIZE: B	8032090
								DATE:	DATE:	SHT 47

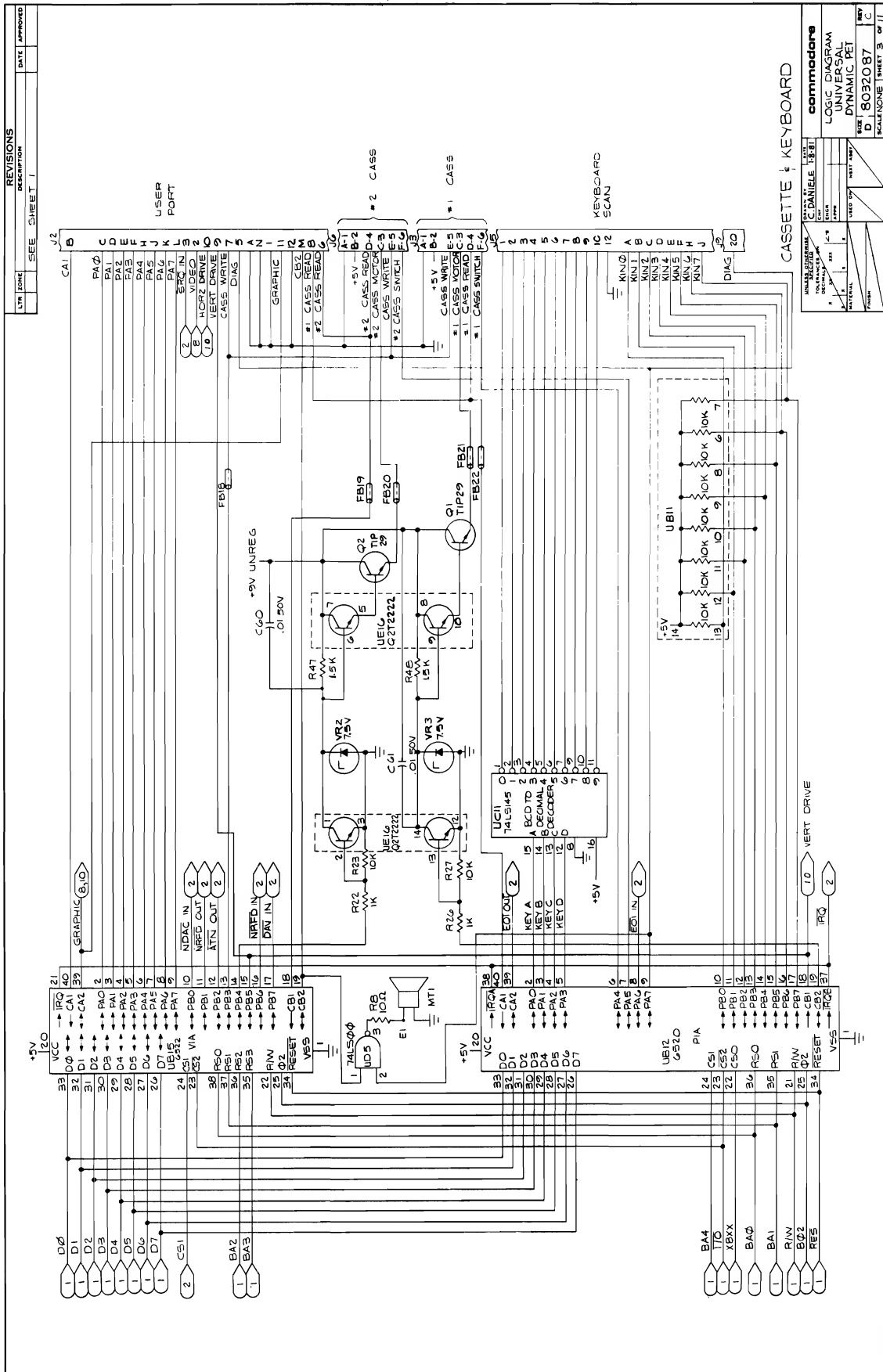
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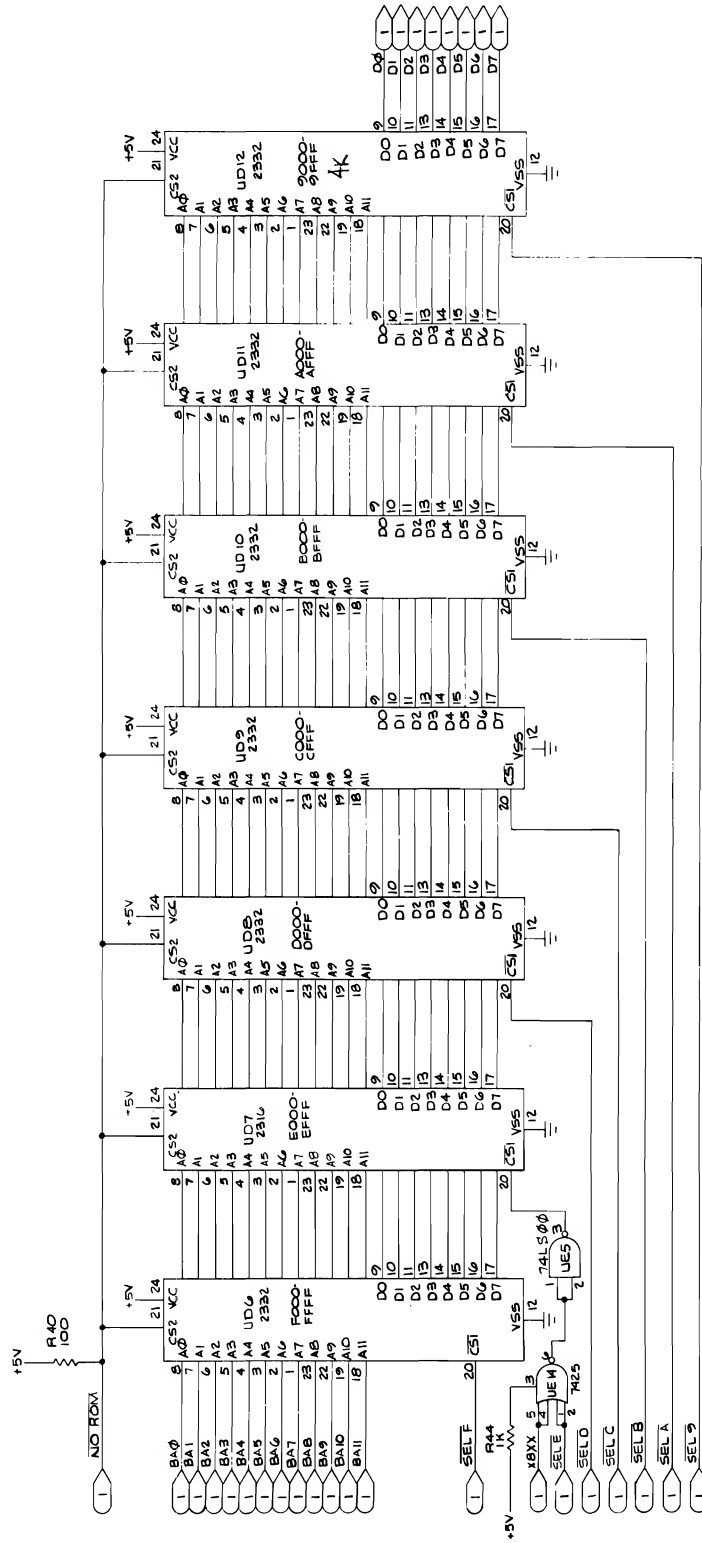


IEEE-488 INTERFACE

DESIGNED BY	C. DANIEL	DATE	12/80
CHECKED BY		DATE	
APPROVED BY		DATE	
SCALE	1:1	SHEET	2 OF 11
COMMODORE LOGIC DIAGRAM UNIVERSAL DYNAMIC PET D 8032087 C			

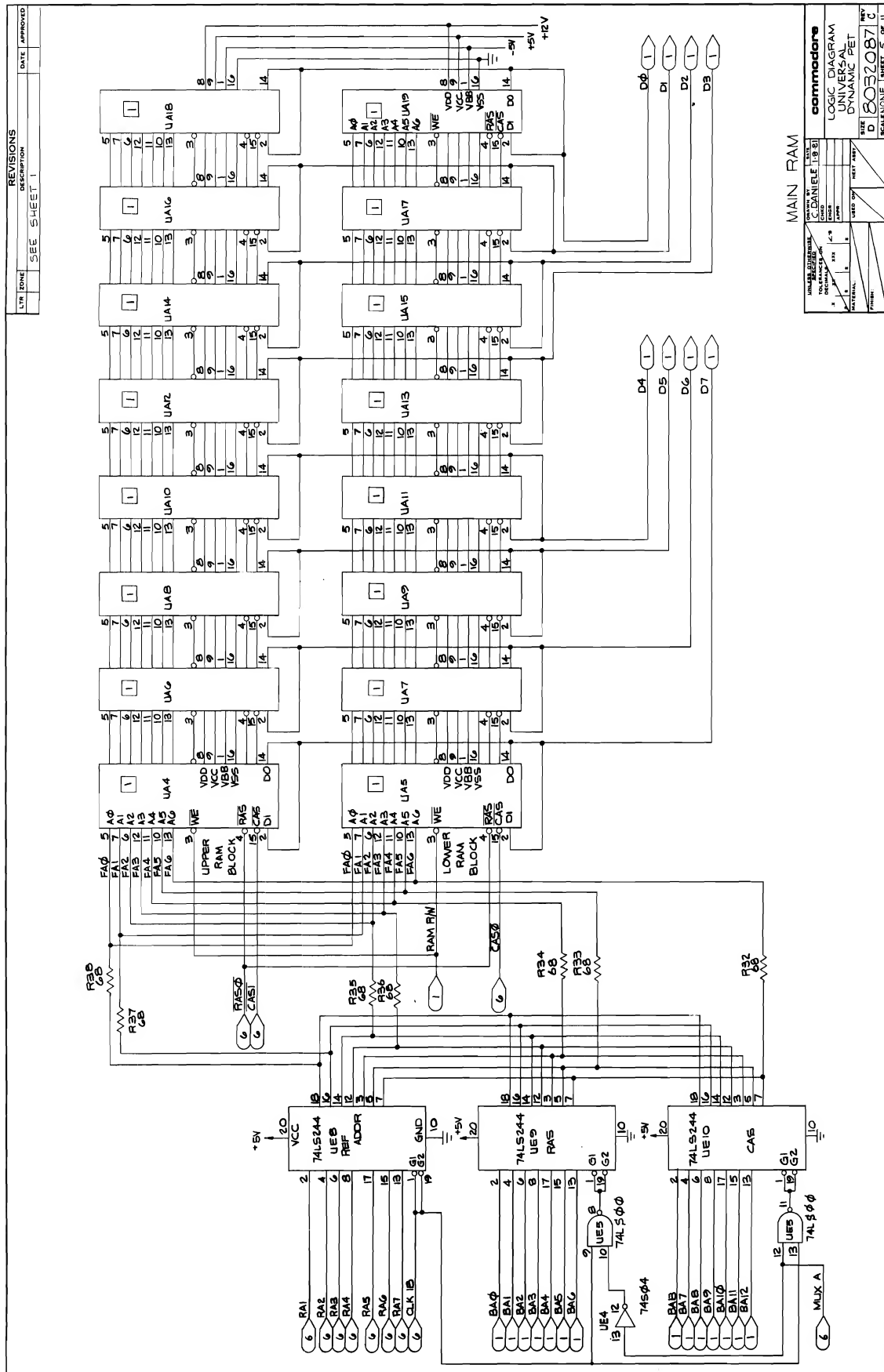


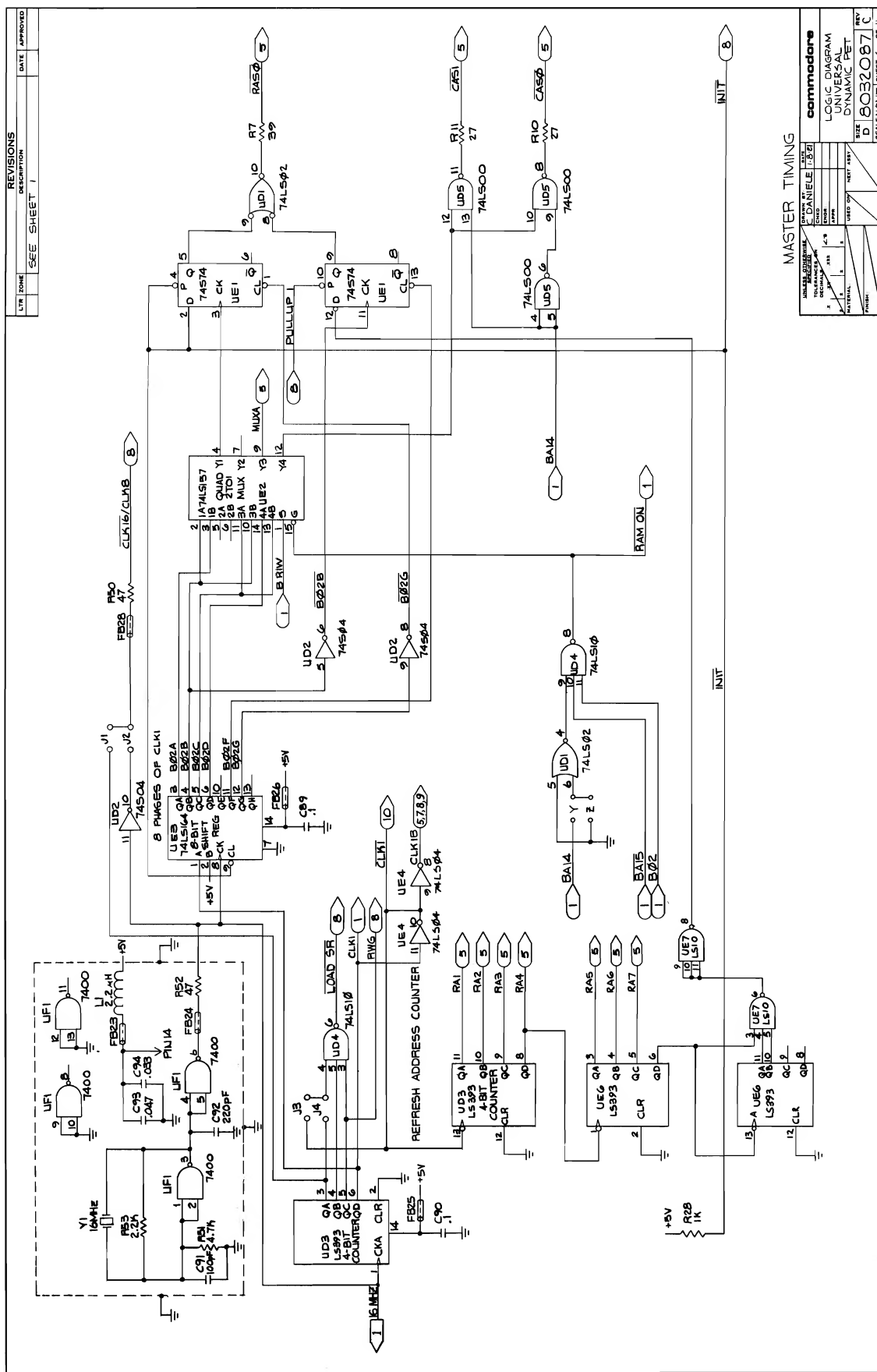
REVISIONS		DATE	APPROVED
LTV	ZONE		
DESCRIPTION			
SEE SHEET 1			



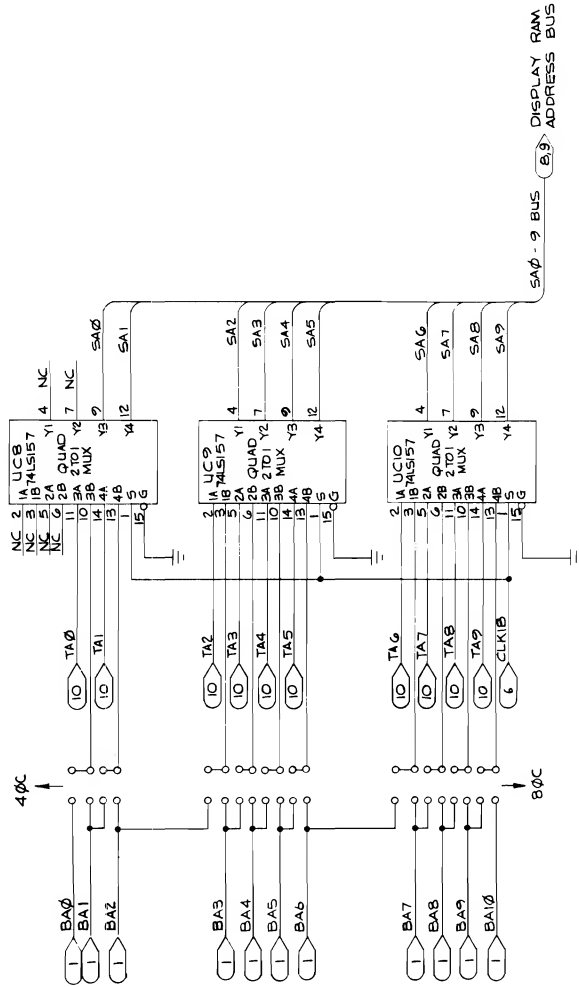
ROMS

C. DANIELE F.R.R.		COMMODORE	
LOGIC DIAGRAM		UNIVERSAL	
DYNAMIC PET		8032087	
REV. C		PAGE 1 OF 1	



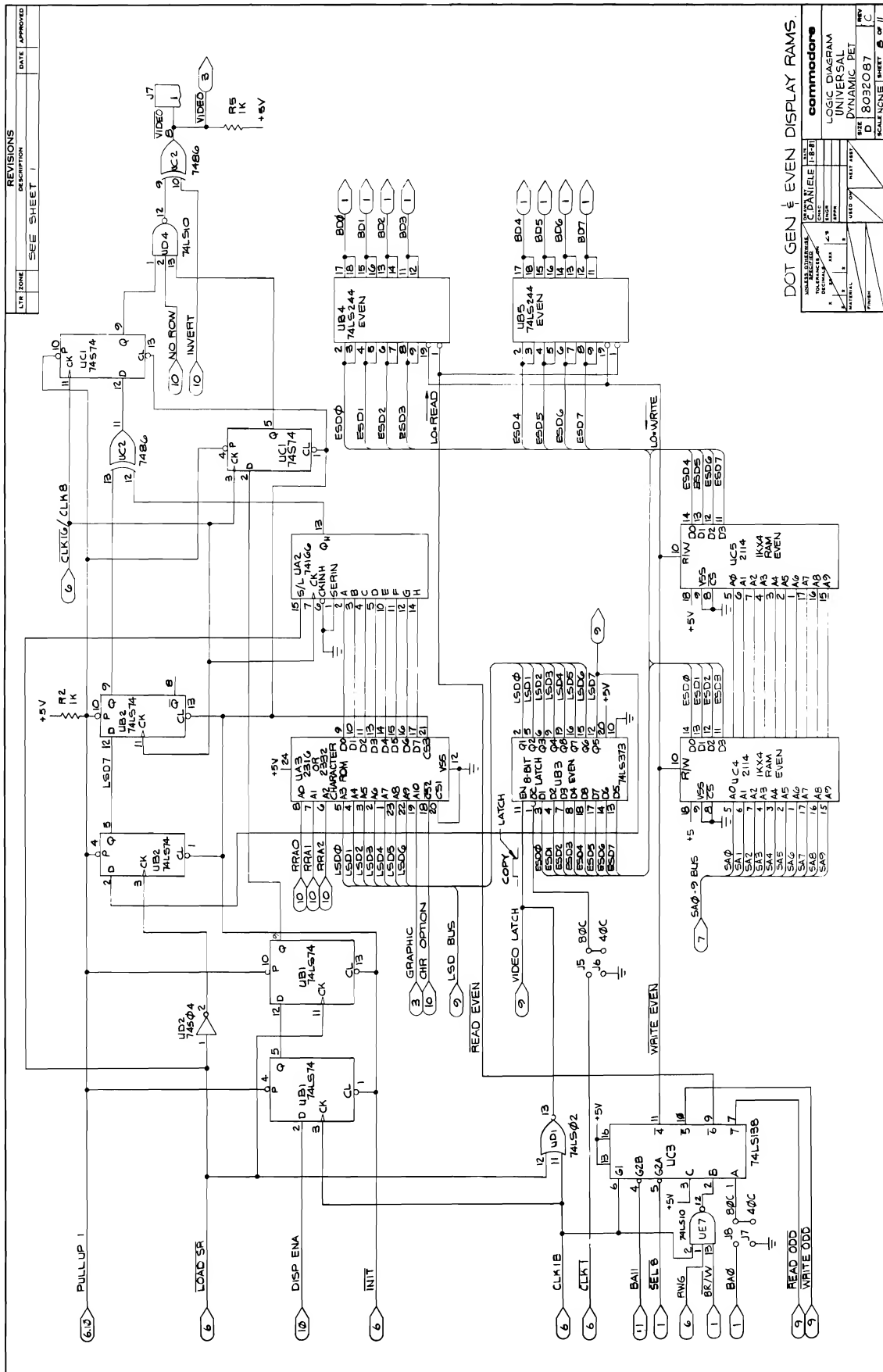


REVISIONS		DATE	APPROVED
1	1000	SEE SHEET 1	

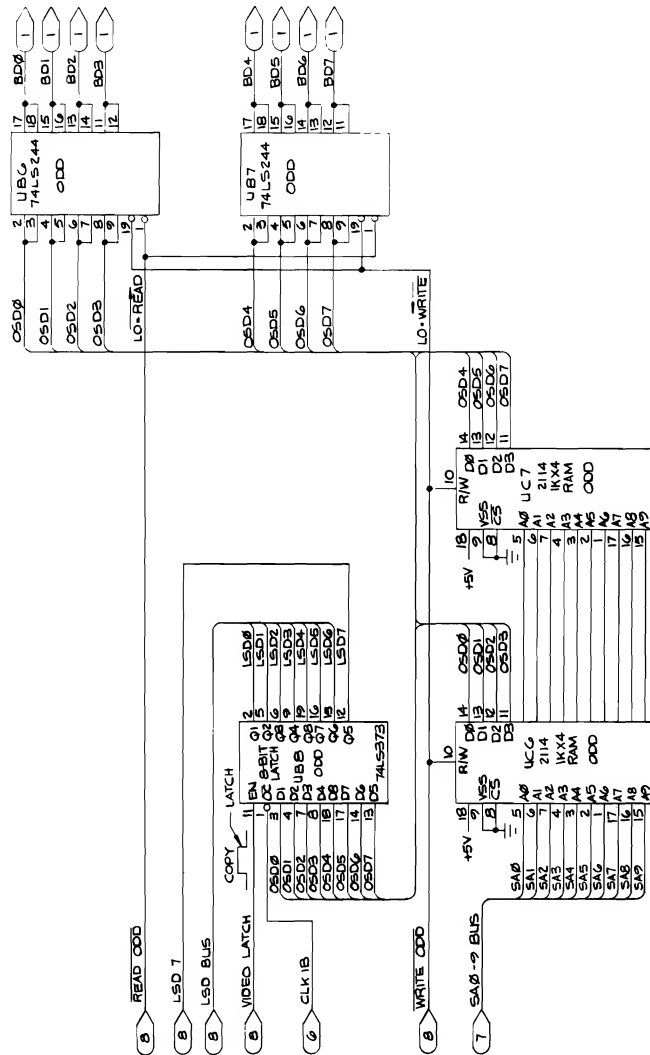


DISPLAY ADDRESS MUX

DESIGNED BY C. DANIEL	DATE 1-88	COMMODORE
CHECKED BY C. DANIEL	DATE 1-88	LOGIC DIAGRAM
APPROVED BY C. DANIEL	DATE 1-88	UNIVERSAL
SCALE 1:1	SCALE 1:1	DYNAMIC PET
PROJECT D 18032087	REVISION 1	DATE 1-88
SHEET 3 OF 11		



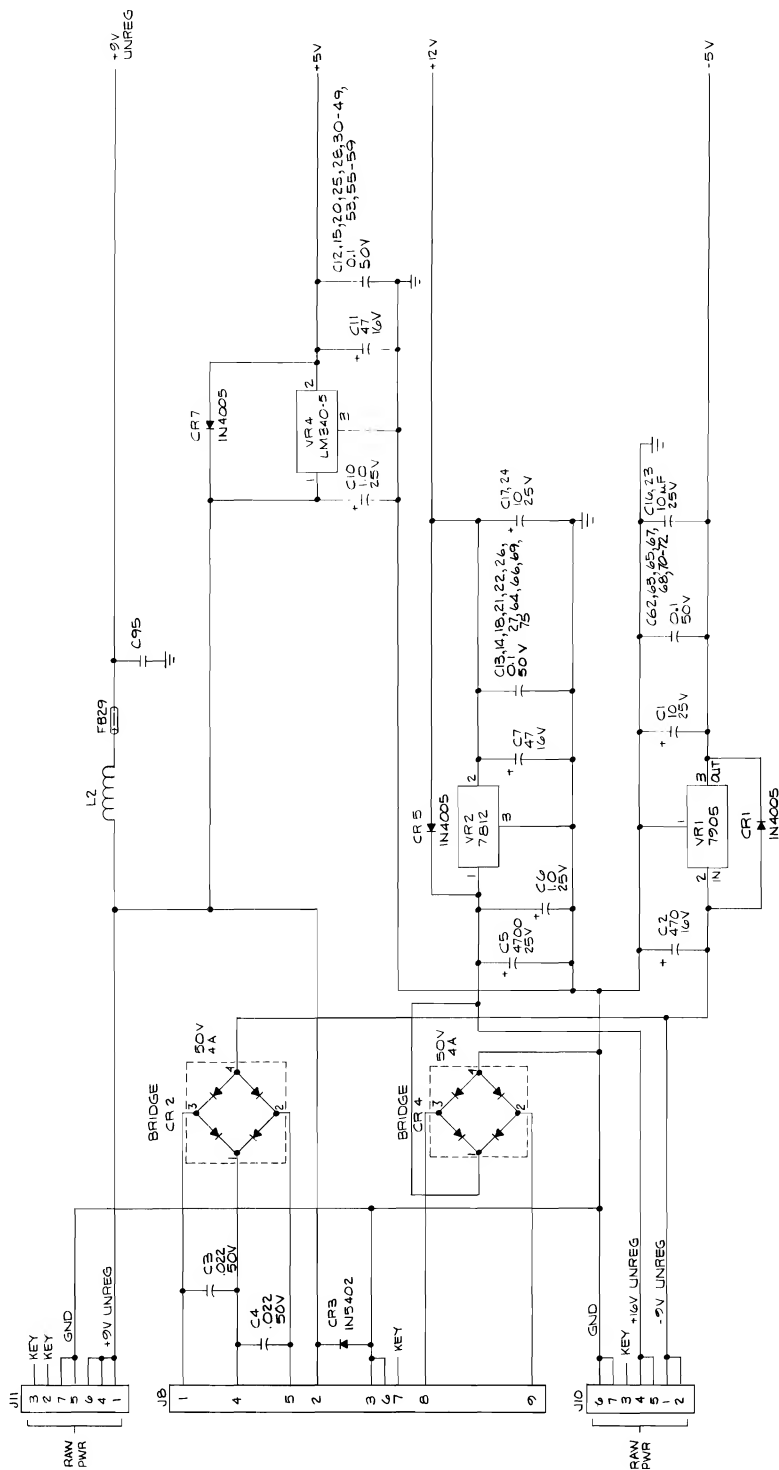
REVISIONS		DATE	APPROVED
LTH	EDM	SEE SHEET 1	



ODD DISPLAY RAMS

COMMADORE		LOGIC DIAGRAM	REV 7
C. DANIELE (1.8.81)		UNIVERSAL	C
DYNAMIC PET		DYNAMIC PET	C
D 8032081		SCALE NONE	SHEET 9 OF 11

REVISIONS			DATE	APPROVED
LN	ZONE	DESCRIPTION		
		SEE SHEET 1		



VOLTAGE REGULATOR

UNIVERSITY OF CALIFORNIA	DATE	SCALE	NO. OF SHEETS
DANIEL Z88			
LOGIC DIAGRAM			
UNIVERSAL			
DYNAMIC PET			
DATE			
D 8032087 C			
SCALE NONE			
SHEET 11 OF 11			

PART NO.	DESCRIPTION
8032080-01	UNIV. DYNAMIC PET 8032-60HZ
-03	4032-60HZ
-05	4016-60HZ
-07	9000-60HZ

LTR	ZONE	DESCRIPTION	DATE	APPROVED
A		PRODUCTION RELEASE	3/5/91	C. K.
B		REVISED PER ECO 2062	3/5/91	
C		REVISED PER ECO 2066	3/5/91	
D		REVISED PER ECO 2068	3/5/91	
E		REVISED PER ECO 2087	3/5/91	
F		REV PER ECO 2564 & 2556	3/5/91	
G		REV PER ECO 2596	3/5/91	
H		REV PER ECO 2700	3/5/91	
J		REVISED PER ECO 2720	3/5/91	

- [10] IDENTIFY WITH APPLICABLE DASH NO.
- [9] COMPONENT SIDE: SOLDER JUMPER WIRE TO IC PIN 21 UB13 TO PIN 8 OF UE6. SOLDER JUMPER WIRE TO IC PIN 3 UB1 TO PIN 6 OF UC3.
- [8] COMPONENT SIDE: CUT PIN 21 OF UB13
CUT PIN 3 OF UB1
- [7] SOLDER SIDE: BRIDGE SHORT PINS 10 & 11 OF UD2 PRIOR TO SOLDER WAVE.
COMPONENT SIDE: CUT PINS 10 & 11 OF UD2
- [6] SOLDER TO XTAL AND PCB.
- [5] FOR ITEMS 116 AND 117 ALL ASSEMBLIES MUST HAVE SAME VENDOR.
- [4] SOLDER JUMPER, ITEM 107 FROM E1 TO SILVER CONTACT ON MT 1, ITEM 69; TAKE CARE TO ALLOW NO MORE THAN ONE SECOND DURATION FOR APPLICATION OF HEAT DURING SOLDERING.

- [14] CUT TRACE FROM UC3/3 TO +5 ON COMP. SIDE: INSTALL JUMPER FROM UC3/3 TO UD3/2 ON SOLDER SIDE.
- [13] FOR SUBSTITUTE PART SEE PART SUBSTITUTION INDEX, PART NO. 321233.
- [12] REWORK INSTRUCTIONS FOR -07 & -08.
JUMPER WIRE FROM UE5 PIN 6 TO UB14 PIN 35. USE 22 AWG.
- [11] ADD JUMPER FROM CATHODE OF VR5 TO NEAREST LEAD OF R47.
- [3] SOLDER AT 3 PLACES, EQUALLY SPACED AROUND THE BRASS BASE MT (ITEM 69).
- [2] IDENTIFY WITH COMMODORE PART NO.
1. SHEET 6 OF 7 SIZE C, SHEET 7 OF 7 SIZE D.

NOTES: UNLESS OTHERWISE SPECIFIED:

commodore	TITLE: PCB ASSY, UNIV. DYNAMIC PET		DATE: 1-30-91	ENGR: J. J. 2000	SIZE: B	DRAWING NUMBER: 8032080
			CHKD: M. ALVES	APPR: J. J. 2000	SHEET: 1	OF: 7

QUANTITY REQD PER PART / DASH NO.				ITEM	8	PART NUMBER	DESCRIPTION	REF DES	BEND	NOTES
01	03	05	06	1	D	8032079	PCB FAB, UNIV. DYNAMIC PET			
				2	D	8032081	LOGIC DIAGRAM, UNIV. DYNAMIC PET			
				3						
				4	B	901435-01	IC, 6502	UB14		
				5	B	901436-01	, 6520	UB16, UB12		
				6	B	901437-01	, 6522	UB15		
				7	B	901479-01	, CRT CONTROLLER	UB13		
				8	B	901521-01	, 74LS00	UD5, UE5, UE11		
				9	B	901521-32	, 74LS86	UC2	SEE NOTE 13	
				10	B	901521-21	, 74LS02	UD1		
				11	B	901521-02	, 74LS04	UE15		
				12	B	901525-01	, 74LS04	UD2, UE4		
				13	B	901521-24	, 74LS10	UD4, UE13		
				14	B	901522-01	, 7417	UD15		
				15	B	901522-20	, 7425	UE14		
				16	B	901521-11	, 74LS157	UC8-UC10, UE2	SEE NOTE 13	
				17	B	901521-16	, 74LS138	UC3		
				18	B	901521-06	, 74LS74	UB1, UB2		
				19	B	901525-09	, 74S74	UC1, UE1		
				20						
				21	B	901521-09	, 74LS145	UC11		
				22	B	901522-13	, 74154	UE12		
				23						
				24	B	901521-28	, 74LS164	UE3	SEE NOTE 13	
				25	B	901522-03	, 74177	UD3, UE6, UE1		
				26						
				27	B	901522-28	, 74166	UA2		
				28	B	901465-22	, 2332	UD6		
				29	B	901465-21	, 2332	UD8		
				30	B	901465-20	, 2332	UD9		
				31	B	901465-23	, 2332	UD10		
				32	B	901447-10	, 2316	UA3		
				33	B	901523-01	, LM555	UD16		
				34	B	901524-01	IC, MC3446	UA20, UB17, UC12		
				35						
				36	B	900462-21	CAP. CERAMIC AXIAL 22PF 50V C54		SEE NOTE 13	
				37	B	900461-16	CAP. CERAMIC AXIAL .01uF 50V C52, 60, 61			
commodore				TITLE: PCB ASSY, UNIV. DYNAMIC PET				DRAWN BY: M. AMES CHKD: [Signature]		
								DATE: 1-30-81	ENG: [Signature]	REV: J
								DATE: 1-30-81	SIZE: B	8032080
								DATE: 1-30-81	APP: [Signature]	SHT: 2/7

QUANTITY REQD PER PART / DASH NO.										ITEM	8	PART NUMBER	DESCRIPTION	REF DES	BOM	NOTES
												</				

QUANTITY REQD PER PART / DASH NO.		ITEM	S	PART NUMBER	DESCRIPTION	REF DES	QTY	NOTES
08	07060504030201	75						
		76						
		77						
1	1	78	B	901527-03	VOLTAGE REGULATOR, 7905, -5V/1.5A VR1			10-220
2	2	79	B	901528-03	VOLTAGE REGULATOR, LM340-5, +5V/1.5A VR3, 4			TO-3; SEE NOTE 13
1	1	80	B	901528-04	VOLTAGE REGULATOR, 7812, +12V/1A VR2			TO-3
		81						
		82						
		83						
1	1	84	B	900556-02	CRYSTAL 16MHZ	Y1		
		85						
		86						
2	2	87	B	904150-04	SOCKET IC, LOW PROFILE, 24 PIN UA3, UD7			
4	4	88	B	904150-04	SOCKET IC, LOW PROFILE 24 PIN UA3, UD7, UD11, UD12			
1	1	89	B	904150-06	SOCKET IC, LOW PROFILE 40 PIN UB14			
		90						
1	1	91	B	903326-07	HEADER ASSY .100 CENTER J10			7 PIN; REMOVE PIN 3 AT ASSEMBLY
2	2	92	B	903345-25	HEADER ASSY, DUAL ROW, 100 CENTER J4, 9			50 PIN
1	1	93	B	903316-09	HEADER ASSY .156 CENTER J8			9 PIN; REMOVE PIN 7 AT ASSEMBLY
1	1	94	B	903331-07	HEADER ASSY, POLARIZED, 100 CENTER J11			7 PIN; REMOVE PIN 3 AT ASSEMBLY
1	1	95	B	903331-07	HEADER ASSY, POLARIZED, 100 CENTER J7			7 PIN; ORIENT OMITTED PIN TO PIN 6 POSITION
1	1	96	B	903331-20	HEADER ASSY, POLARIZED, 100 CENTER J5			20 PIN; ORIENT OMITTED PIN TO PIN 19 POSITION
		97						
1	1	98	B	320268-01	HEAT SINK			
1	1	99	B	904907-01	HEAT SINK, COMPOUND THERMAL			
		100						
6	6	101	B	906403-19	RIVET, DOME HEAD, OPEN END			
2	2	102	B	906404-04	RIVET, DOME HEAD, CLOSED END			
		103						
20	20	104	B	903378-01	22 AWG BARE WIRE ON TAPE, REEL			
		105						
1	1	106	B	903755-03	WIRE, INSULATED, #22 AWG			
1	1	107	B	903780-01	#30 WIRE WRAP WIRE, RED			
1	1	108	B	320086-02	BUS WIRE			
		109						
11	11	110	B	901521-13	IC, 74LS244	UB4, UB7, UB9, UB10, UD13, UD14, UE8, UE9, UE10		
9	9	111	B	901521-13	IC, 74LS244	UB4, UB5, UB9, UB10, UD13, UD14, UE8, UE9, UE10		

commodore

TITLE: PCB ASSY, UNIV. DYNAMIC PET

DRWN BY: M. AMES
CHKD BY: [Signature]

DATE: 1-30-91
ENGR: [Signature]
APPR: [Signature]

SIZE: B
REV: J
SHT: 4

QUANTITY REQD PER PART / DASH NO.				ITEM	PART NUMBER	DESCRIPTION	REF DES	QTY	NOTES
08	01	06	05	04	03	02	01		
2	2							12	B
2	2							13	B
4	4							14	B
4	4							15	B
16	16							16	B
8	8							17	B
1	1							18	B
1	1							19	B
1	1							20	B
1	1							21	B
1	1							22	
								23	
								24	
								25	
								26	
								27	
								28	
								29	
								30	
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								42	
								43	
								44	
								45	
								46	
								47	
								48	

commodore

TITLE: PCB ASSY,
UNIV. DYNAMIC PFT

DRWN BY: M. AMES
CHKD: CHKO

DATE: 1-30-81

ENGR: APPR:

DATE: SIZE: B

REV: J

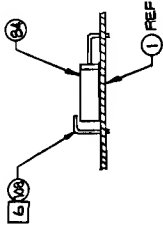
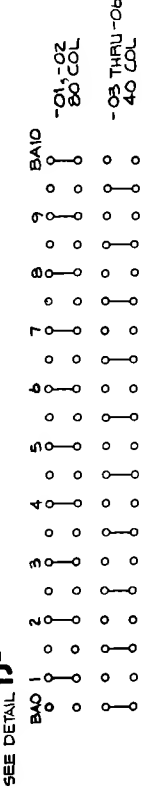
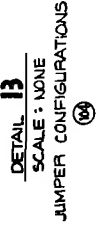
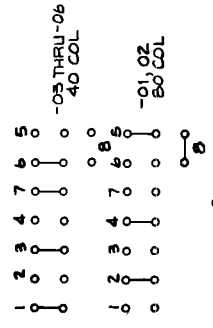
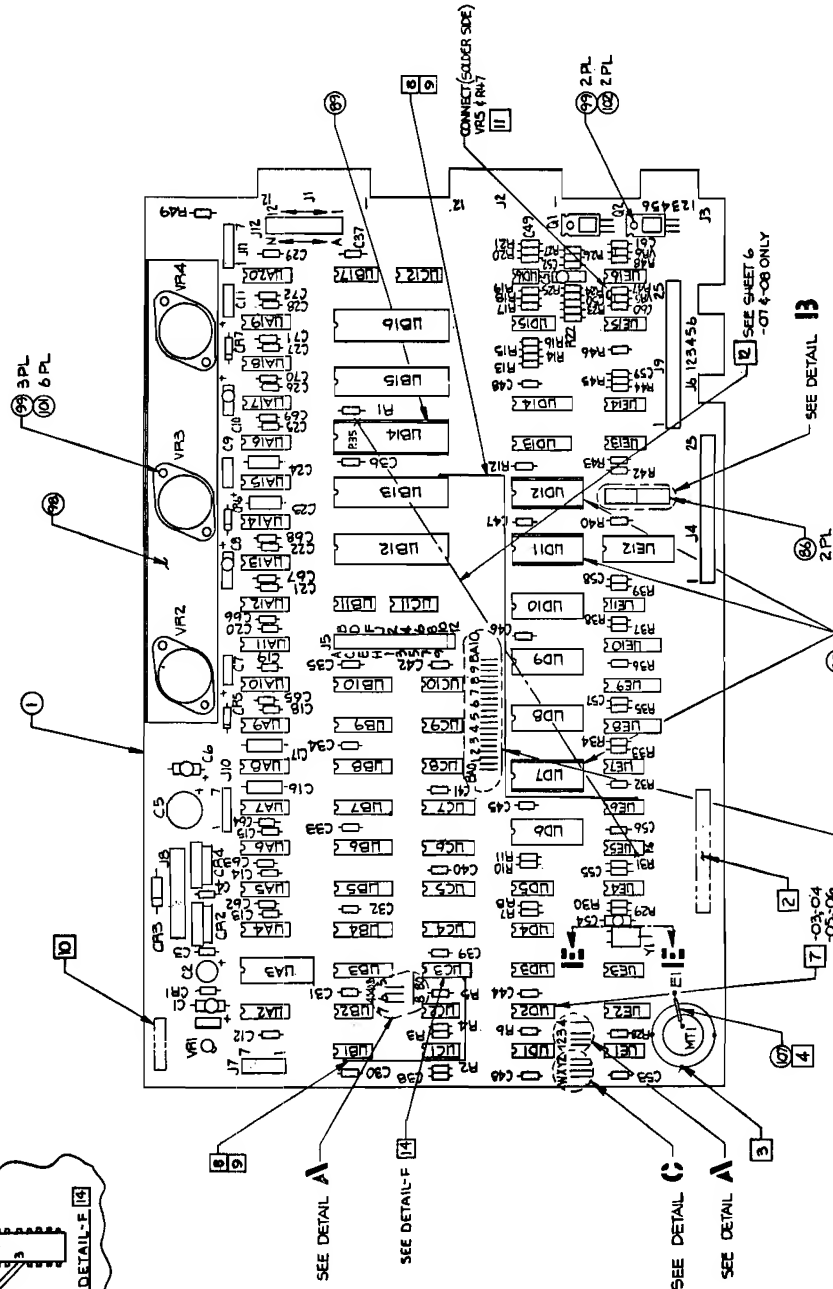
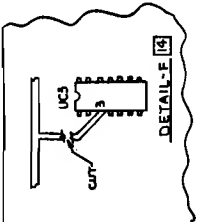
SHT: 57

8032080

J

57

REVISIONS		DATE	APPROVED
LYR	DESCRIPTION		
1	SEE SHEET 1		

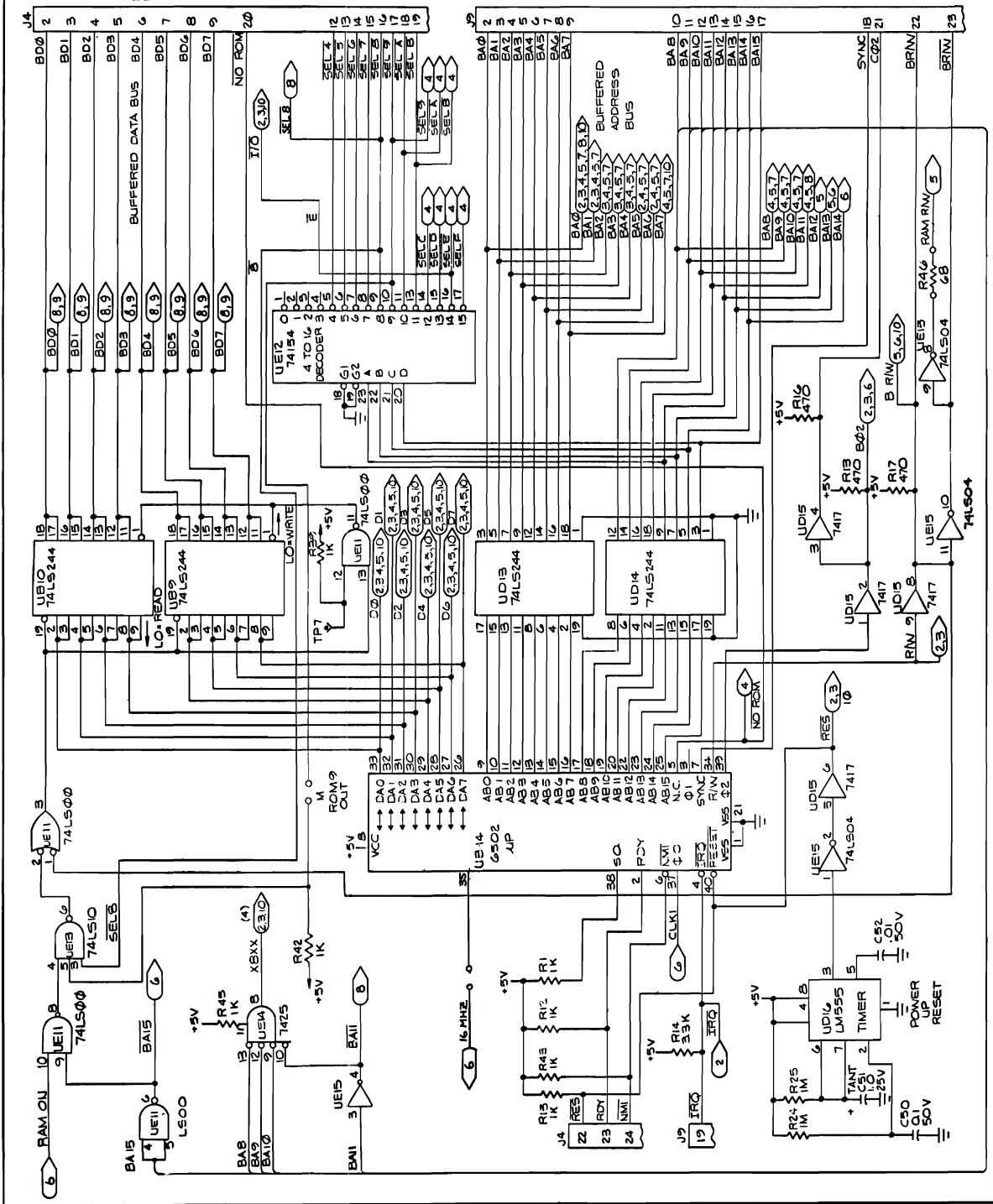


-01 THRU -08 SHOWN

commodore		DATE	APPROVED
PCB ASSY-	UNIV. DYNAMIC PET		
ID	8032080	SCALE	1/1
		SHEET	7 OF 7

REVISIONS		
DATE	DESCRIPTION	APPROVED
1/14/77	PRODUCTION RELEASE	
1/14/77	REVISED PER ECO 2091	
1/14/77	REV PER ECO 2574	
1/14/77	REVISED PER ECO 2607	
1/14/77	REV PER ECO 2596	

MEMORY EXPANSION



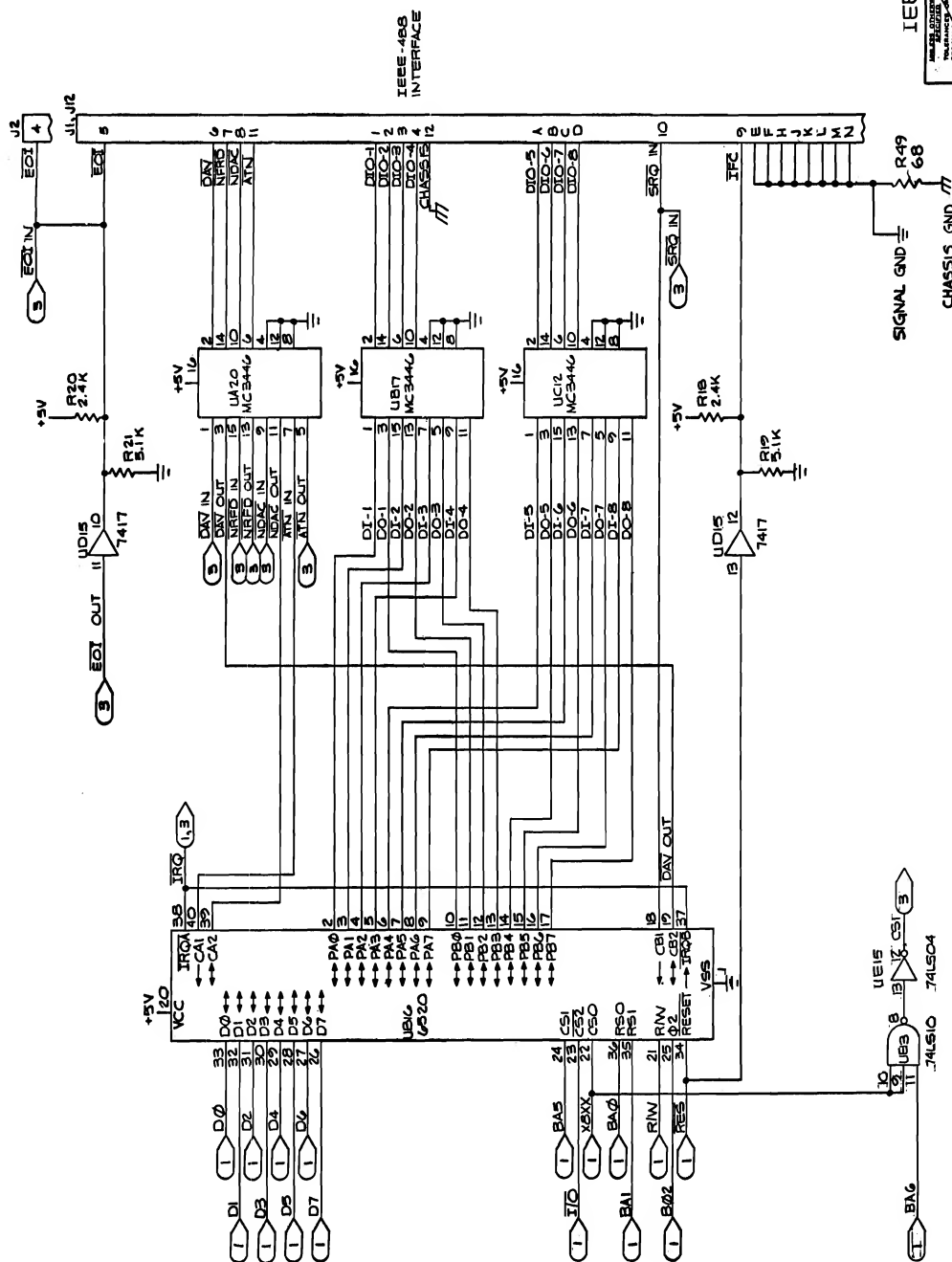
- ALL CAPACITOR VALUES ARE MEASURED IN MICROFARADS.
- ALL RESISTOR VALUES ARE IN OHMS 5% AND ARE 1/4 WATT.
- REFER TO ASSEMBLY DRAWING NUMBER B032030.

NOTES UNLESS OTHERWISE SPECIFIED:

CPU & MEMORY EXPANSION

DESIGNED BY	C. DANIELS	DATE	1/14/77
CHECKED BY	J. B. BROWN	DATE	1/14/77
APPROVED BY		DATE	1/14/77
PROJECT	8031 B032030	SHEET	1 OF 11
LOGIC DIAGRAM	UNIVERSAL		
DYNAMIC PET			
DATE	1/14/77		
BY			
REV	D	8032030	E

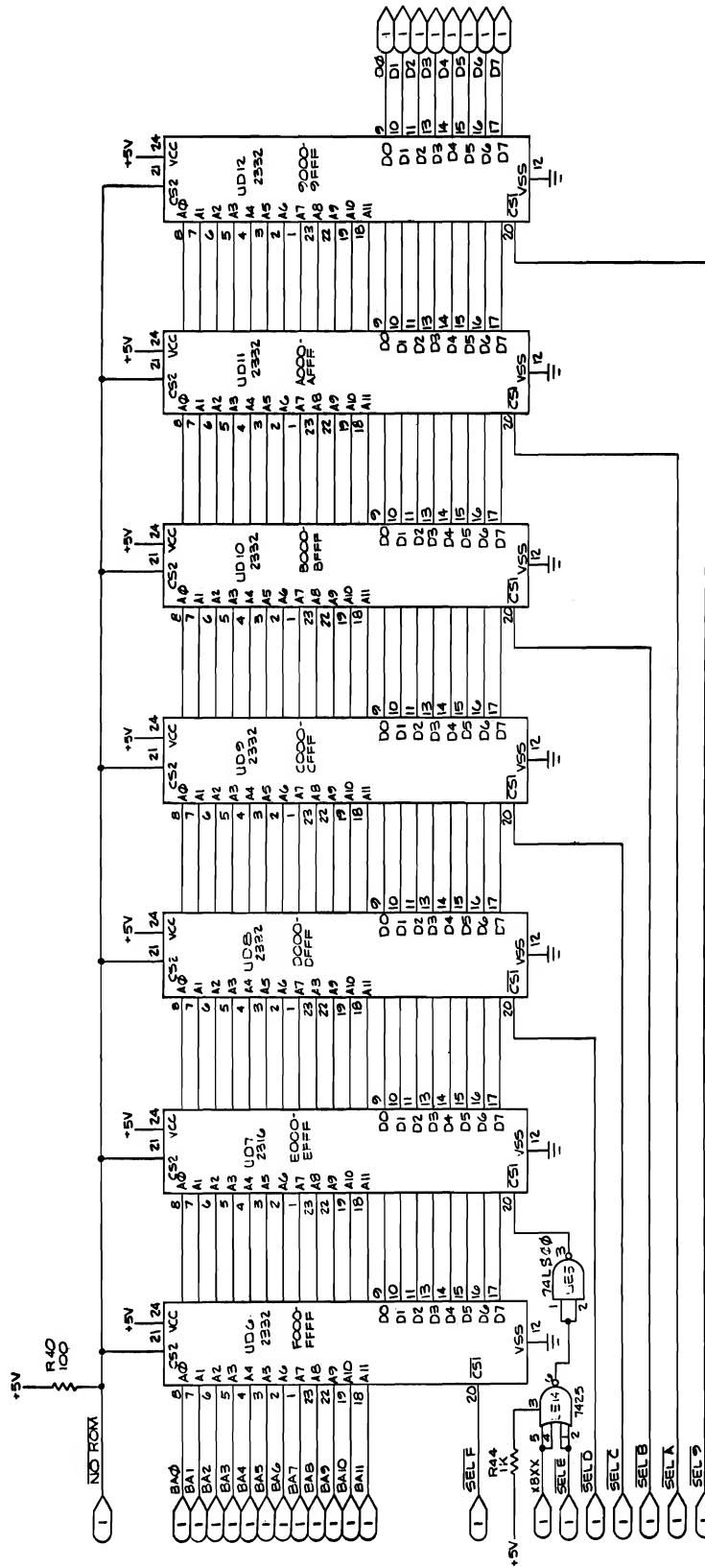
REVISIONS		DATE	APPROVED
LTR	DATE	DESCRIPTION	
1		SEE SHEET 1	



IEEE-488 INTERFACE

commodore	
LOGIC DIAGRAM	UNIVERSAL DYNAMIC PET
SEE	8032081 E
SCALE	1:1
SHEET	2 OF 11

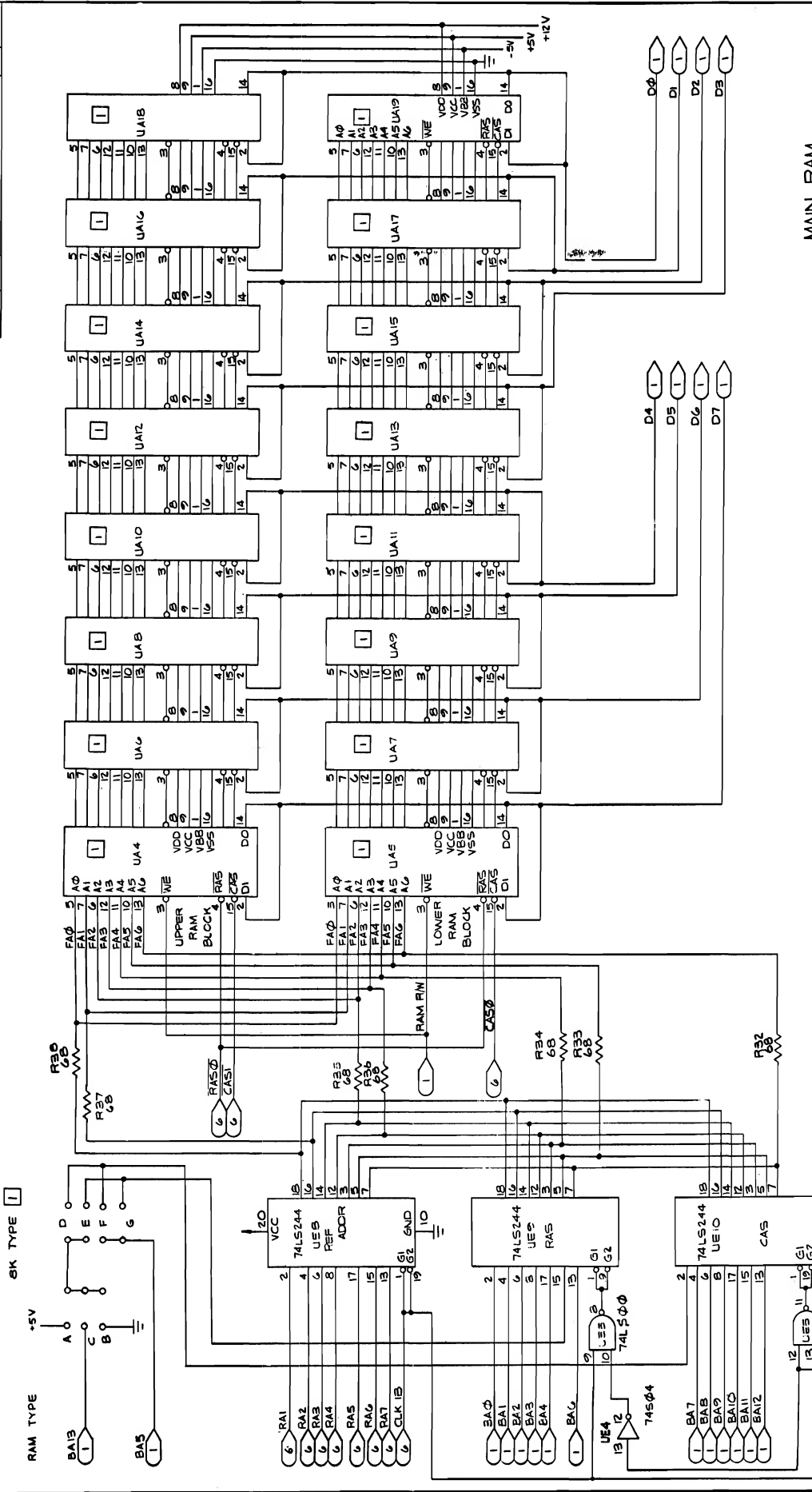
REVISIONS		
REV	DESCRIPTION	DATE
1	SEE SHEET 1	APPROVED



ROMS

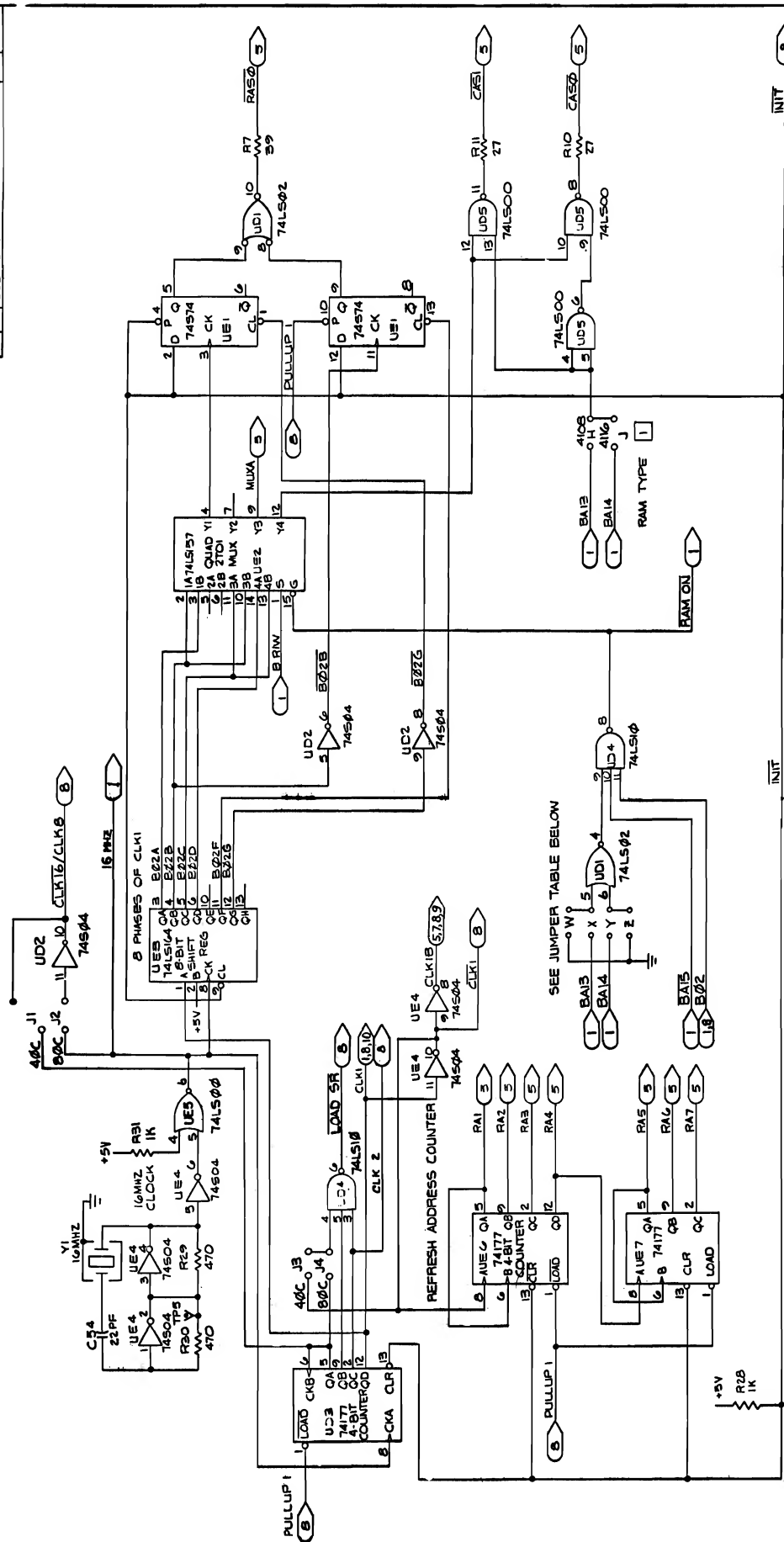
MANUFACTURER	DATE	SIZE
COMMADORE		
LOGIC DIAGRAM		
UNIVERSAL		
DYNAMIC		
PET		
FILE	D	8032081
DATE	1	8
DESIGNER		
CHECKED		
APPROVED		
USED ON		
PROJECT		

REVISES		DATE		APPROVED	
DATE	DESCRIPTION	DATE	DESCRIPTION	DATE	DESCRIPTION
1	SEE SHEET 1				



MAIN RAM		DATE		APPROVED	
DESCRIPTION		DATE		APPROVED	
1					

commodore		DATE		APPROVED	
LOGIC DIAGRAM		DATE		APPROVED	
UNIVERSAL		DATE		APPROVED	
DYNAMIC PET		DATE		APPROVED	
D18032081E		DATE		APPROVED	
PAGE 5 OF 11		DATE		APPROVED	



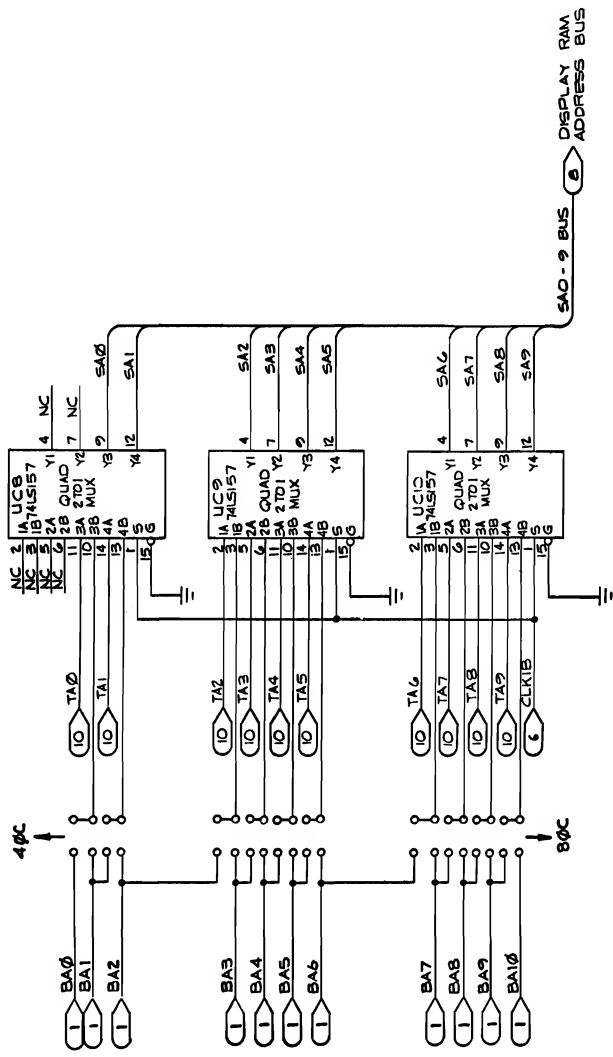
JUMPER TABLE

MEMORY JUMPERS			
	32K	16K	8K
W			
X			
Y			
Z			

MASTER TIMING

ANALYSIS OF THE POLYMERIZATION OF VINYL MONOMERS		DRAWN BY C. S.		DATE 1968		COMMERCIAL LOGIC DIAGRAM UNIVERSAL DYNAMIC PET	
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.		USED ON PAPER		SIZE D 18032081		REV E	
SCALE 1/16" = 1"		SHEET NO. 11		OF 11		SCALE 1/16" = 1"	

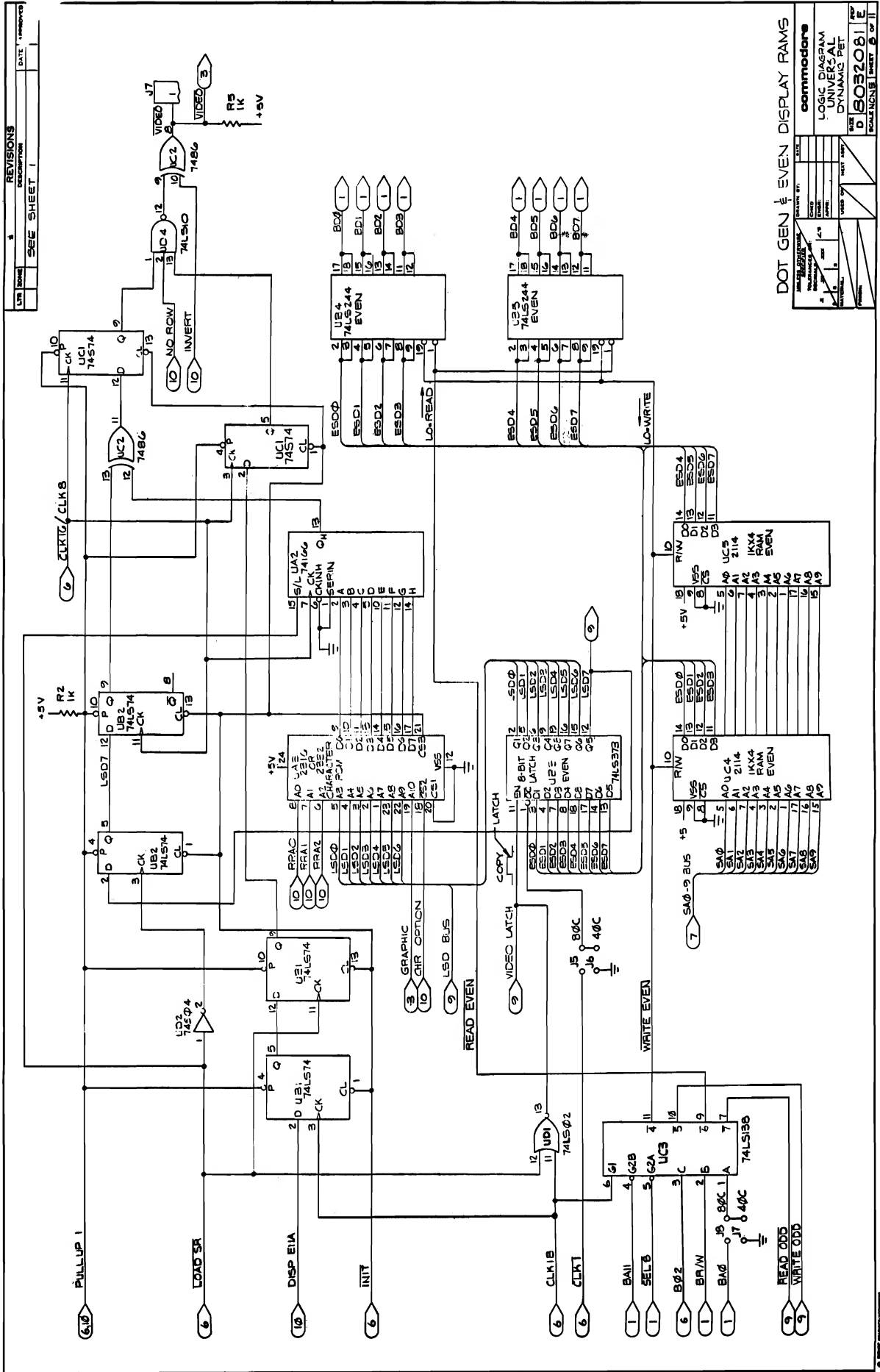
REVISEMENTS		DATE	APPROVED
1	SEE SHEET 1		



DISPLAY ADDRESS MUX

DATE	REV	SCALE	NO. OF SHEETS
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3	3	3	3
4	4	4	4
5	5	5	5
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98	98	98	98
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100	100	100	100

REV	DATE	DESCRIPTION
1	SEE SHEET 1	REVISIONS



REV	DATE	DESCRIPTION
1	SEE SHEET 1	REVISIONS

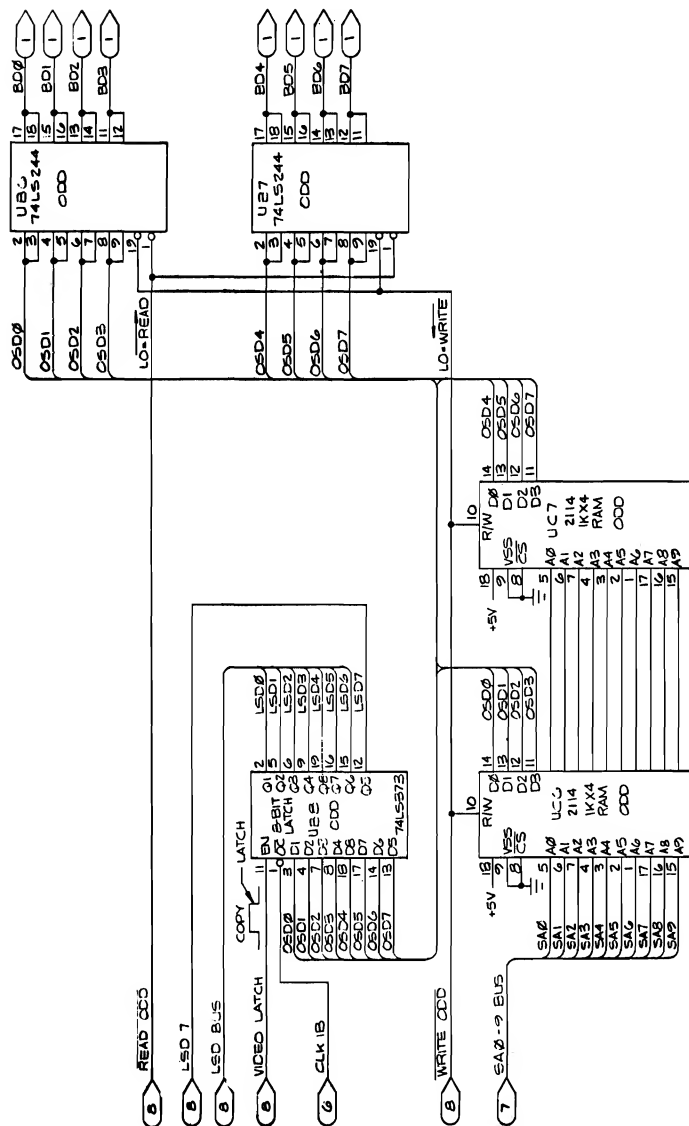
DOT GEN & EVEN DISPLAY RAMS

LOGIC DIAGRAM
UNIVERSAL
DYNAMIC PET

8032081E

SCALE 100% 11

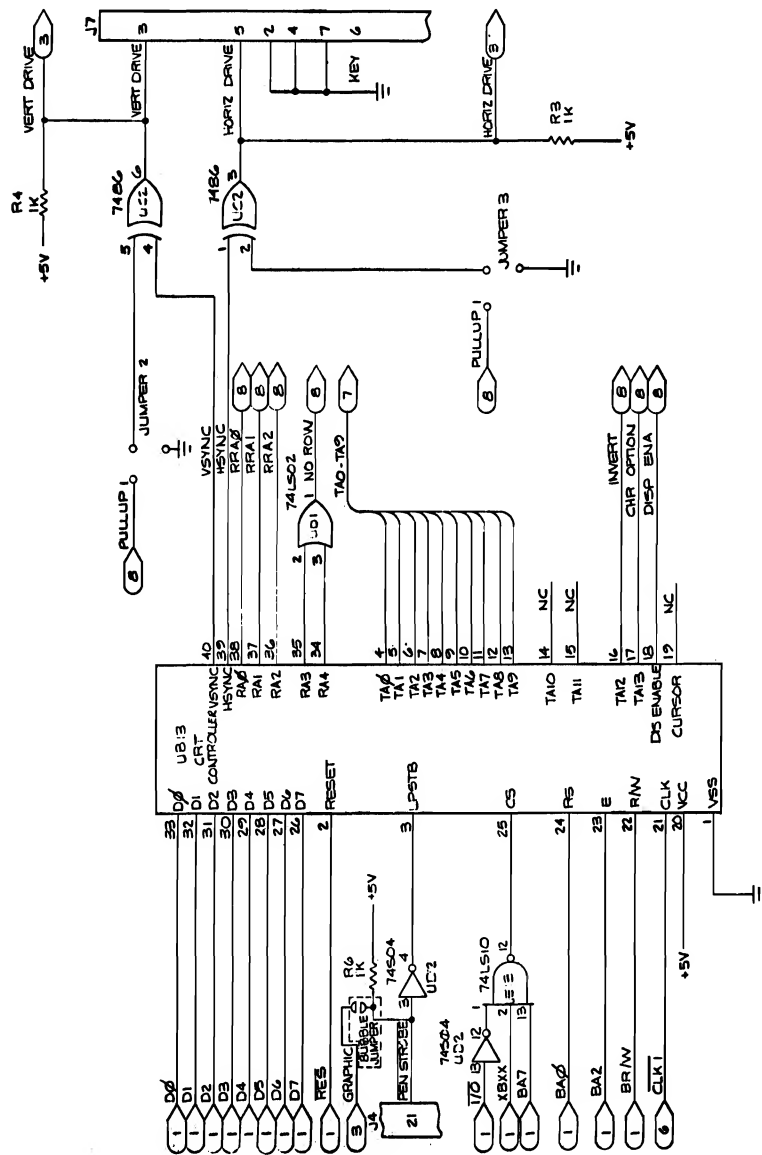
REVISIONS		DATE		APPROVED	
LYE	FORME	DESCRIPTION		SEE SHEET 1	



ODD DISPLAY RAMS

REVISIONS		DATE		APPROVED	
LYE	FORME	DESCRIPTION		SEE SHEET 1	

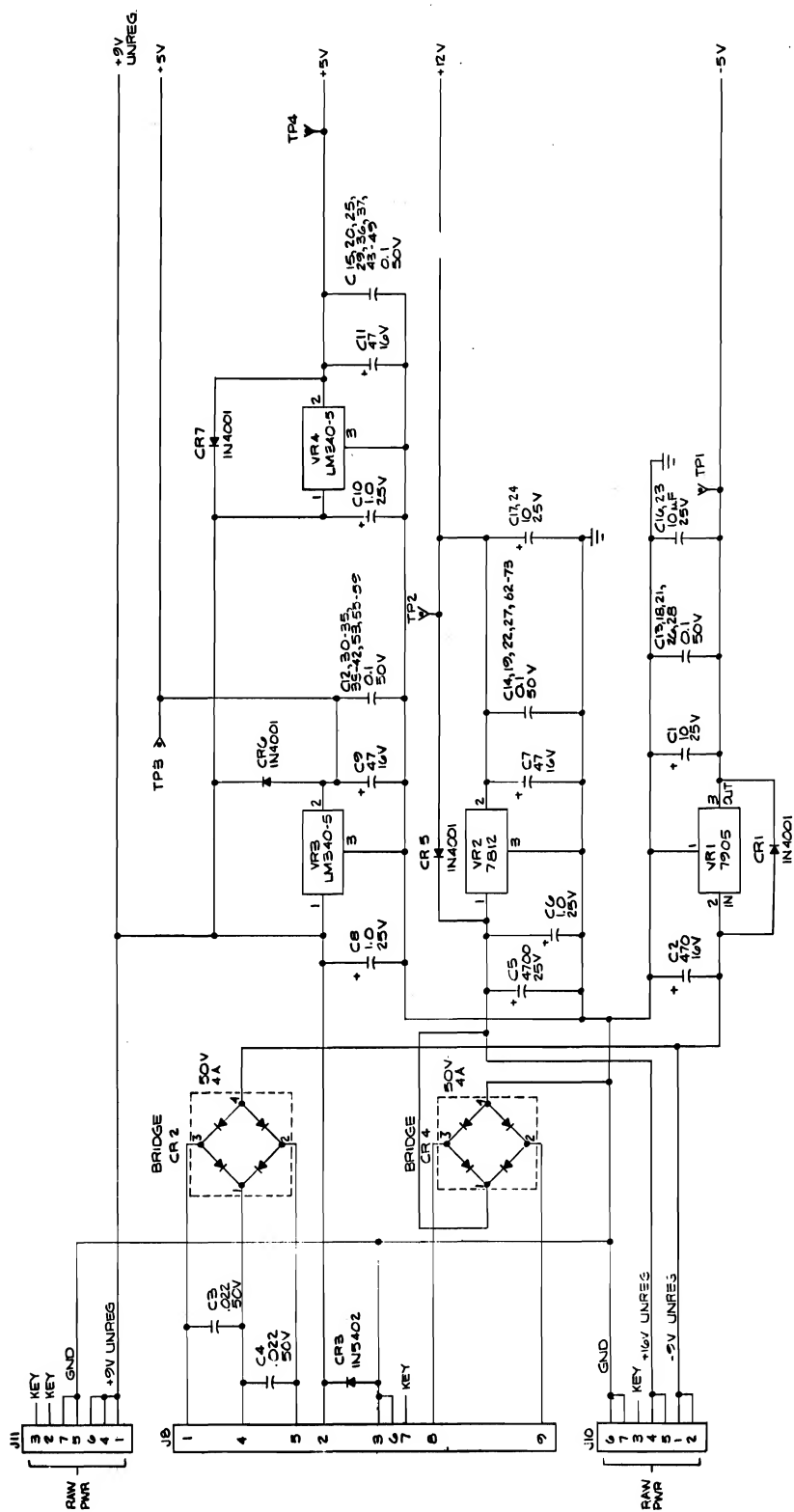
REVISIONS		
DATE	DESCRIPTION	APPROVED
1	SEE SHEET 1	



CRTC AND SYNC BUFFERS

DATE	1/1/78
DESIGNED BY	COMMODORE
CHECKED BY	
APPROVED BY	
LOGIC DIAGRAM	
UNIVERSAL	
DYNAMIC PET	
SIZE	D
QUANTITIES	8032081
REV	E
SHEET	10 OF 11

REVISIONS		DATE	APPROVED
LTR	DATE		
DESCRIPTION			
SEE SHEET 1			



VOLTAGE REGULATOR

REVISIONS		DATE	APPROVED
LTR	DATE		
DESCRIPTION			
SEE SHEET 1			

REVISIONS		DATE	APPROVED
LTR	DATE		
DESCRIPTION			
SEE SHEET 1			

REVISIONS		DATE	APPROVED
LTR	DATE		
DESCRIPTION			
SEE SHEET 1			

REVISIONS		DATE	APPROVED
LTR	DATE		
DESCRIPTION			
SEE SHEET 1			

PART NO.	DESCRIPTION	REVISIONS				
		LTR	ZONE	DESCRIPTION	DATE	APPROVED
8032051-01	POWER SUPPLY ASSY, 8032 117V UL	A		PRODUCTION RELEASE	8/24/80	[Signature]
		B		REV PER ECO 1935	8/25/80	[Signature]
		C		REV PER ECO 2028	8/29/80	[Signature]
		D		REV PER ECO 2284	9/16/80	[Signature]
		E		REV. PER ECO 2177	8-25-82	[Signature]

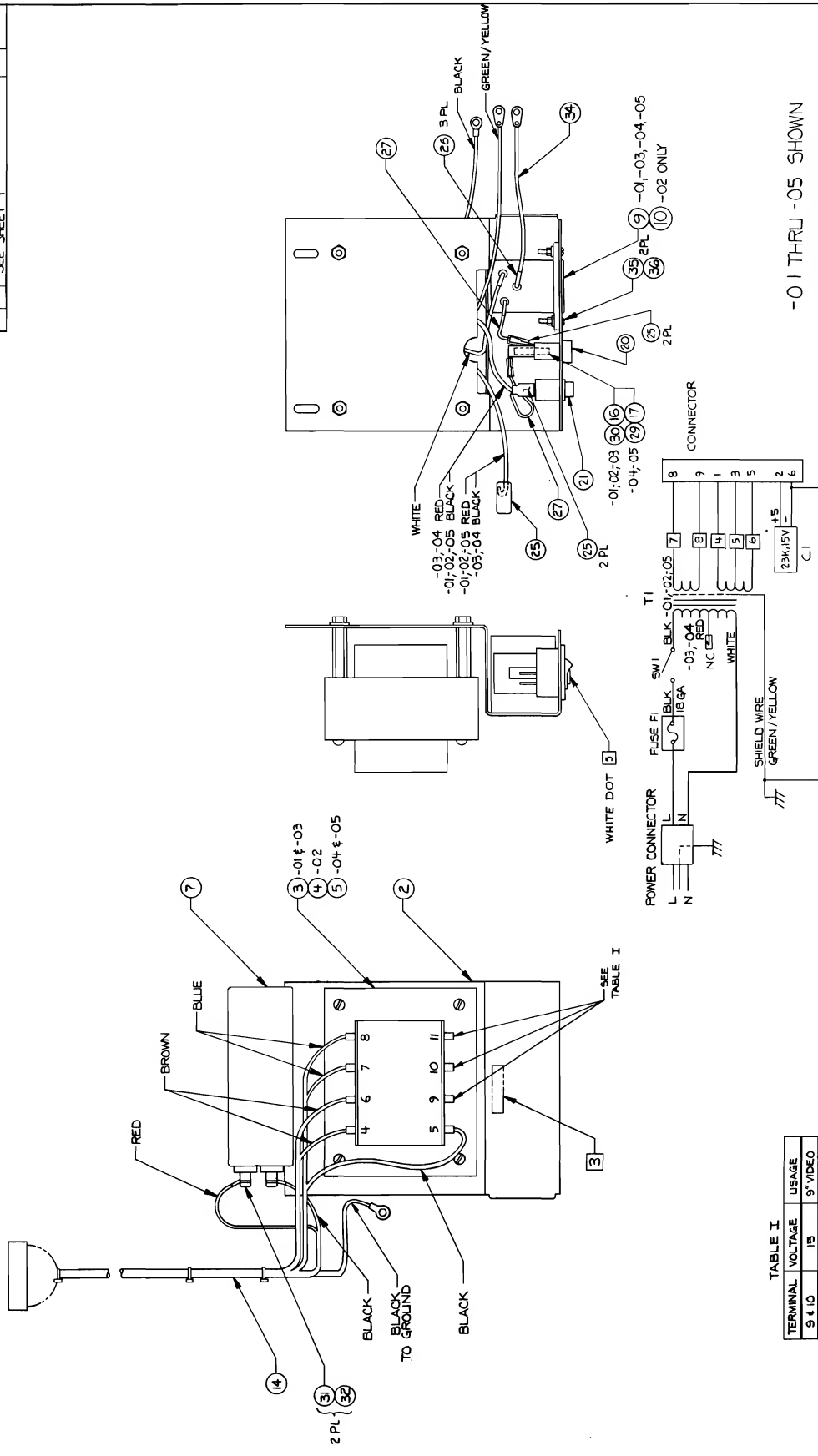
- ☐ 6 REFER TO PART SUBSTITUTE INDEX P/N 321233.
☐ 5 SWITCH SHOWN IN 'OFF' POSITION.
 4. ALL LEADS WILL HAVE A MINIMUM OF ONE WRAP AROUND TERMINALS PRIOR TO SOLDERING.
☐ 3 IDENTIFY WITH COMMODORE PART NO. 8032051 AND APPLICABLE DASH NO. LOCATE APPROX AS SHOWN.
☐ 2 DASH 04 CONFIGURATION SHALL BE USED FOR VDE, SEV 4 SEMKO.

1. SHEET 3 OF 3 SIZE D
 ASSY DWG
 NOTES - UNLESS OTHERWISE SPECIFIED:

commodore	TITLE: POWER SUPPLY ASSY, 8032	DRAWN BY: K. CHRISTENSEN	DATE: 8/22/80	ENGR: [Signature]	SIZE: B	DRAWING NUMBER: 8032051
		CHKD: [Signature]	DATE: 8-19-80	APPR: [Signature]	SHEET: 3	OF 3

QUANTITY REQD PER PART / DASH NO.				ITEM	QTY	PART NUMBER	DESCRIPTION	REF DES	REMARKS	NOTES
				1		8032043-02	CHASSIS, POWER, UNIVERSAL			
				2	D	320902-01	TRANSFORMER	TI		SEE NOTE 6 FOR SUBSTITUTE
				3	C					
				4						
				6						
				7	B	900102-01	CAPACITOR 23,000 MFD	CI		
				8						
				9	B	903467-03	FILTER POWER CONNECTOR			
				11						
				12						
				13						
				14	B	320289-01	DYNAMIC PET POWER HARNESS			
				15						
				16	B	903557-04	FUSE, 125V SLO-BLO 1.6A	FI		
				18						
				19						
				20	B	903611-03	FUSE HOLDER	XFI		FOR SUBSTITUTE SEE NOTE 6
				21	B	904507-01	SWITCH, ROCKER	SWI		
				22						
				23						
				24						
				25	B	320479-02	TUBE, SHRINKABLE			
				26	B	320478-01	TUBE, SHRINKABLE			
				27	B	320059-01	LEAD WIRE (BLACK)			
				28						FOR SUBSTITUTE SEE NOTE 6
				30	B	903612-02	FUSE CARRIER			
				31	B	906630-03	SCREW, PAN HEAD, #10-32 X.250 LG			
				32	B	905650-03	WASHER, LOCK, INT TOOTH #10			
				33						
				34	C	320925-05	GROUND CABLE ASSY			
				35	B	906600-06	SCREW PAN HEAD #4-40X.438 LG			
				36	B	905970-05	NUT KEPS #4-40			
				37						
commodore				TITLE: POWER SUPPLY ASSY, 8032				DATE: 4/22/80	ENGR: K. CHRISTENSEN	DATE: 8-19-80
								CHKD: N.P.	APPR:	REV: E
								SIZE: B	8032051	SHT: 2/3


REVISIONS		DATE	APPROVED
1	SEE SHEET 1		



commandore		POWER SUPPLY	ASSY, 8032
DATE	8032	DATE	8032051
BY	8016	BY	8016
CHECKED	8016	CHECKED	8016
APPROVED	8016	APPROVED	8016
SHEET 3 OF 3		SHEET 3 OF 3	

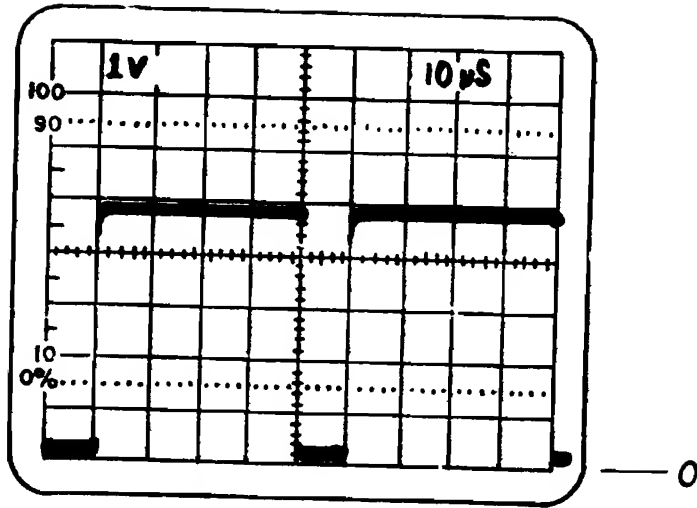
321450

REVISIONS			
LT#	ZONE	DESCRIPTION	DATE
A		PRODUCTION RELEASE	12/24/80

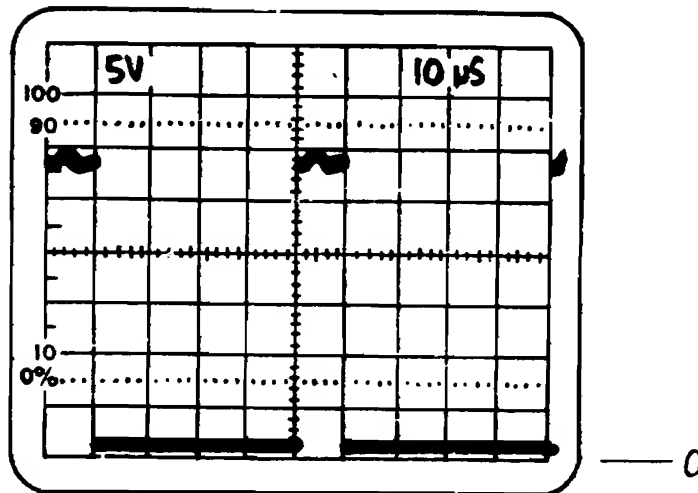
<p>THE INFORMATION AND DATA CONTAINED HEREIN IS PROPRIETARY AND SHALL NOT BE USED OR DUPLICATED WITHOUT PERMISSION OF COMMODORE BUSINESS MACHINES, INC.</p>				
DRAWN BY: <i>Mouton</i>	DATE: 12-5-80	 <p>commodore</p>		
CHKD: <i>[Signature]</i>	12/9/80			
ENGR: <i>[Signature]</i>	12/24/80			
PROB:				
APPD:				
<p>TITLE: PCB WAVEFORMS 12" CRT DISPLAY</p>		SIZE: A	DWG NO. 321450	REV: A
<p>RELEASE DATE</p>		<p>SHEET 1 OF 10</p>		

VIDEO (1/1)

1



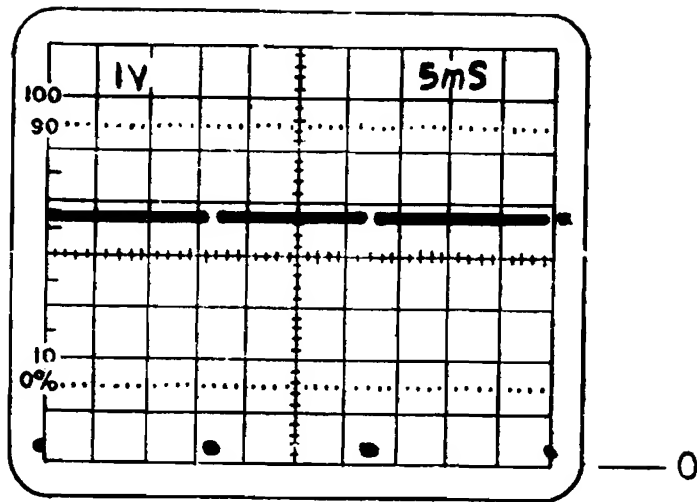
2



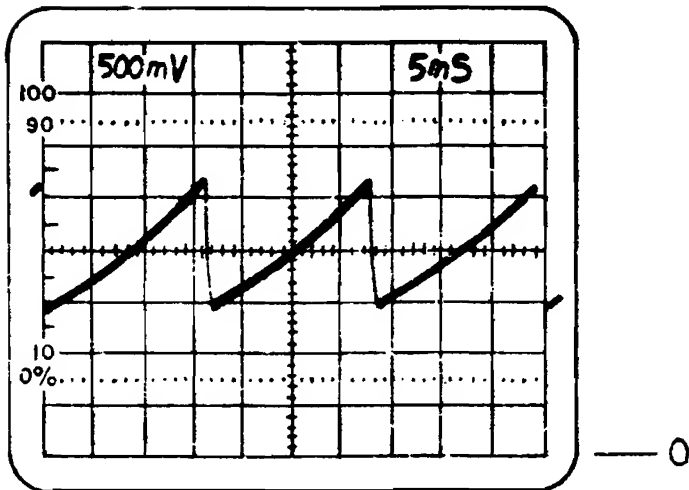
commodore		
PCB WAVEFORMS		
12" CRT DISPLAY		
SIZE A	321450	REV A
SCALE NONE	SHEET 2	OF 10

VERTICAL (1/3)

3



4



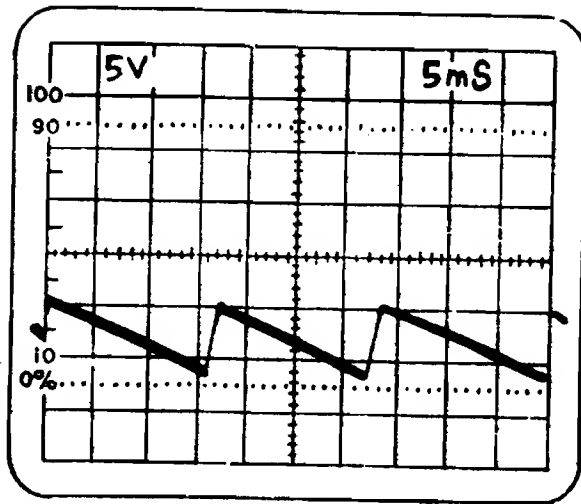
commodore

PCB WAVEFORMS
12" CRT DISPLAY

SIZE A	321450	REV A
SCALE NONE	SHEET 3	OF 10

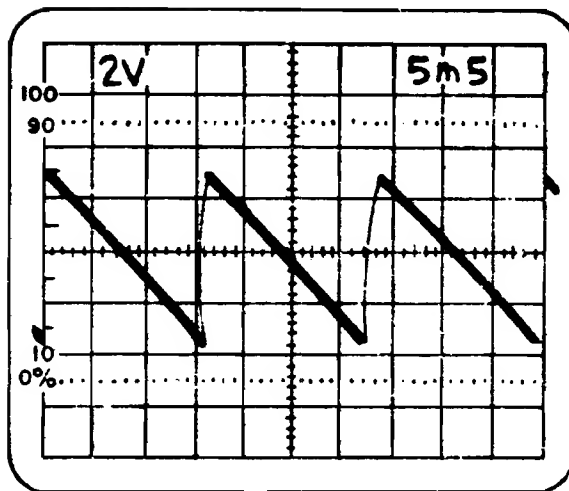
VERTICAL (1/3)

5



0

6



0

commodore

PCB WAVEFORMS
12" CRT DISPLAY

SIZE

A

321450

REV

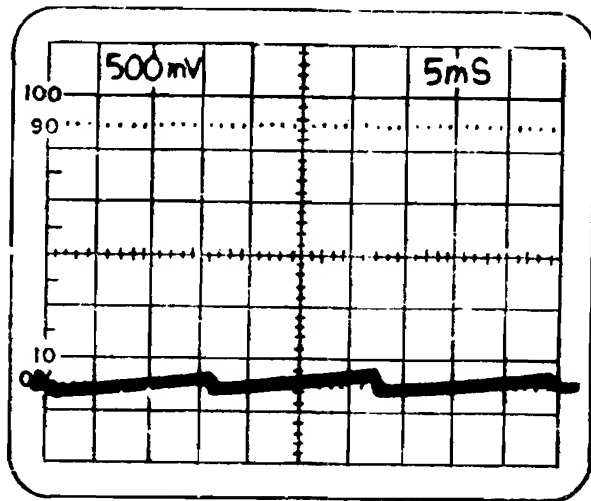
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SCALE NONE

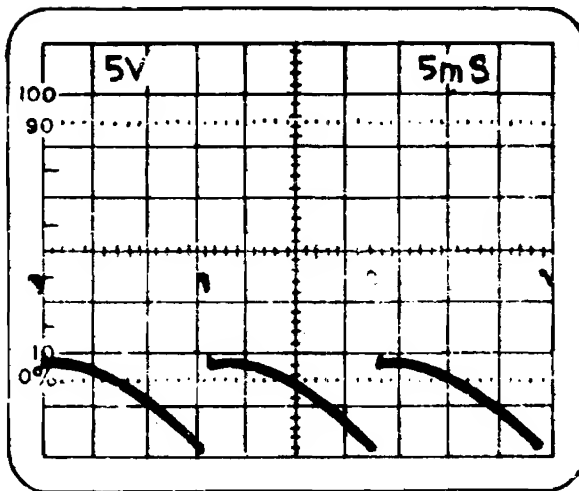
SHEET 4 OF 10

VERTICAL (2/3)

7



8



commodore

PCB WAVEFORMS

12" CRT DISPLAY

SIZE

A

321450

REV

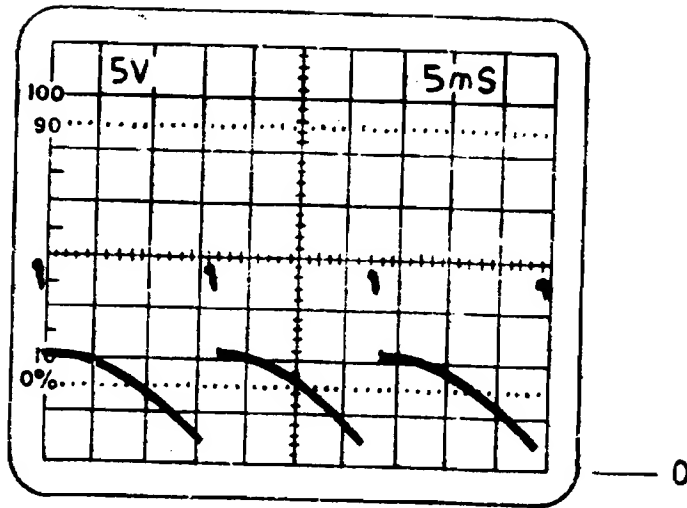
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SCALE NONE

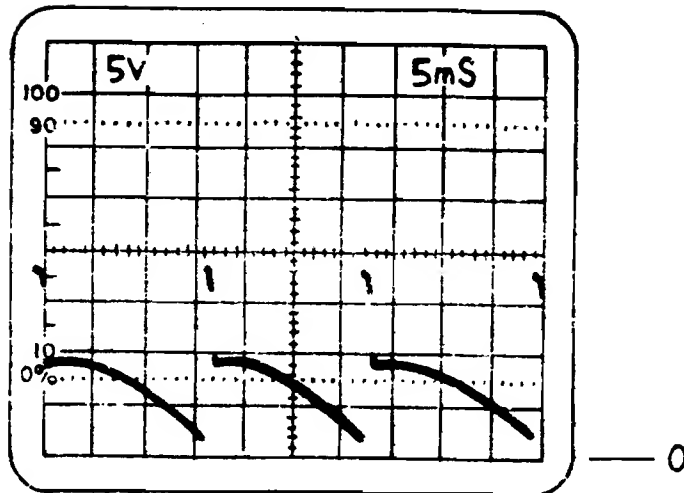
SHEET 5 OF 10

VERTICAL (2/3)

9



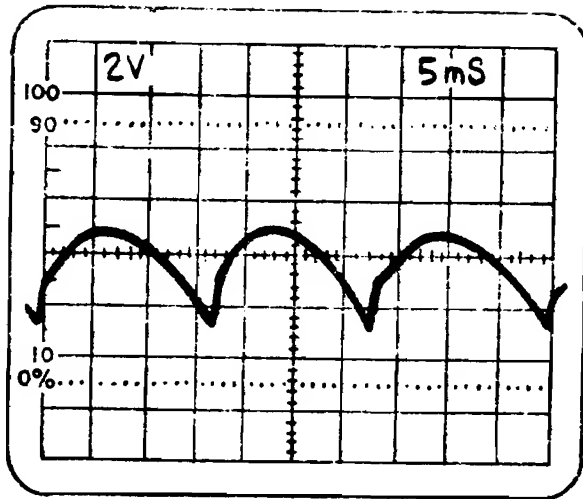
10



commodore			
PCB WAVEFORMS			
12" CRT DISPLAY			
SIZE	321450		REV
A			A
SCALE	NONE	SHEET 6	OF 10

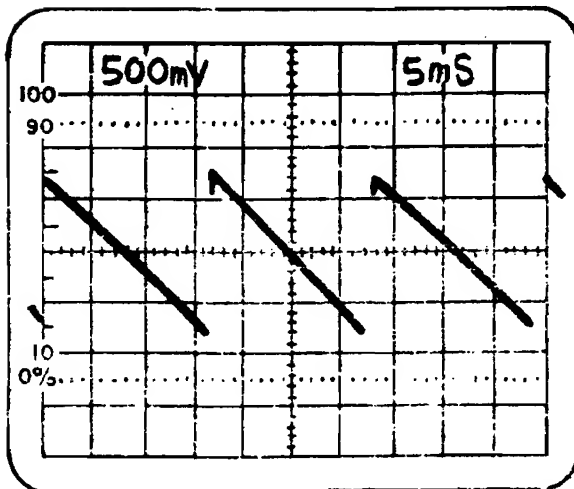
VERTICAL (3/3)

11



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12

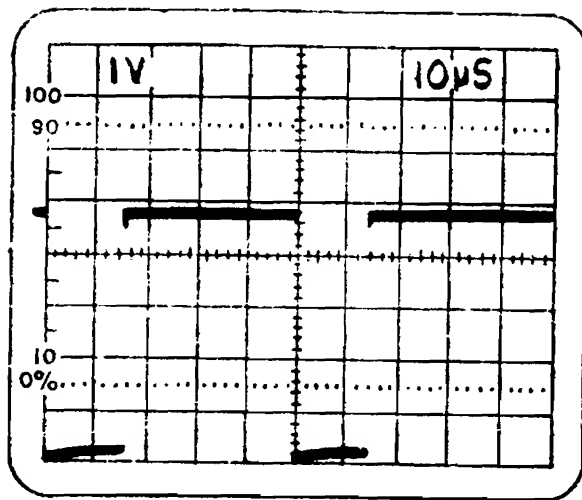


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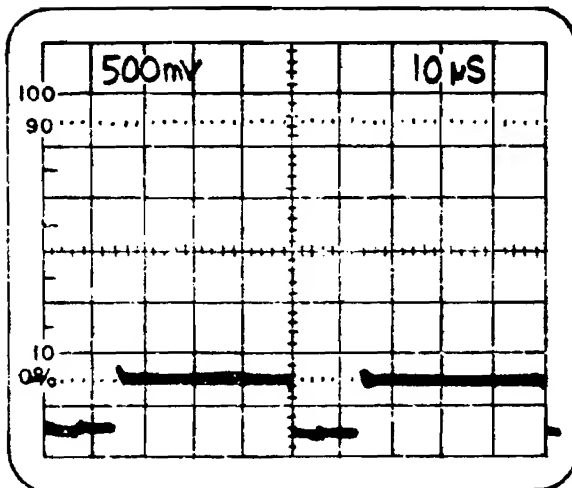
commodore		
PCB WAVEFORMS		
12" CRT DISPLAY		
SIZE	321450	REV
A		A
SCALE NONE	SHEET 7	OF 10

HORIZONTAL (1/2)

13



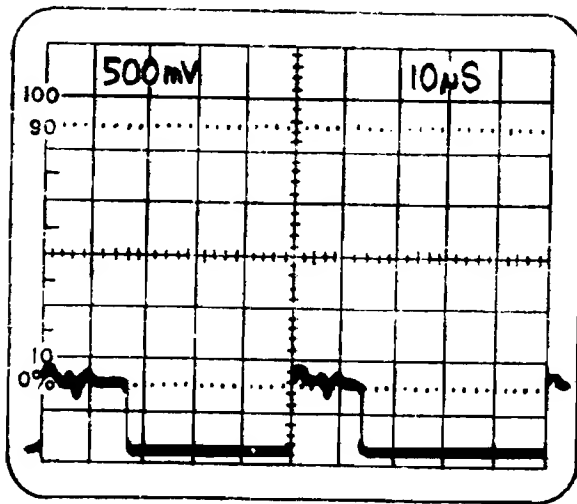
14



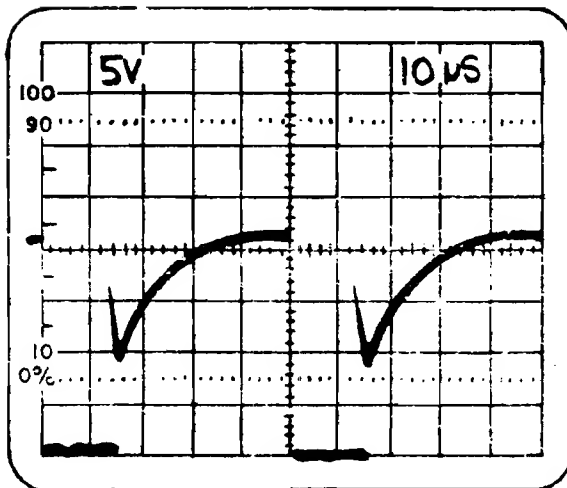
commodore		
PCB WAVEFORMS		
12" CRT DISPLAY		
SIZE A	321450	REV A
SCALE NONE	SHEET 8 OF 10	

HORIZONTAL (1/2)

15



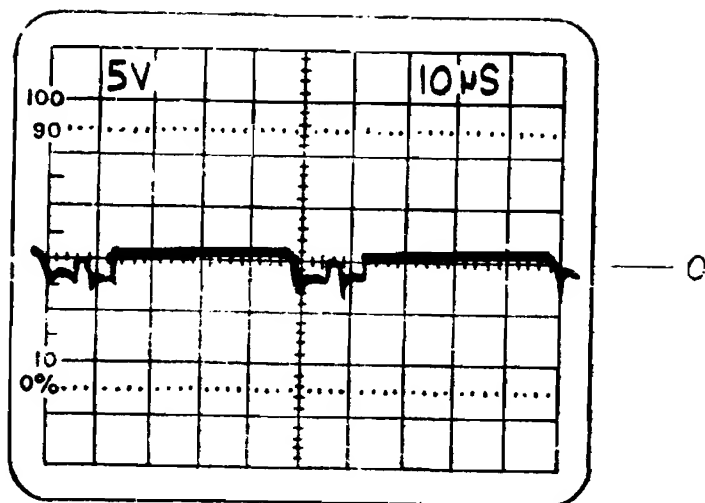
16



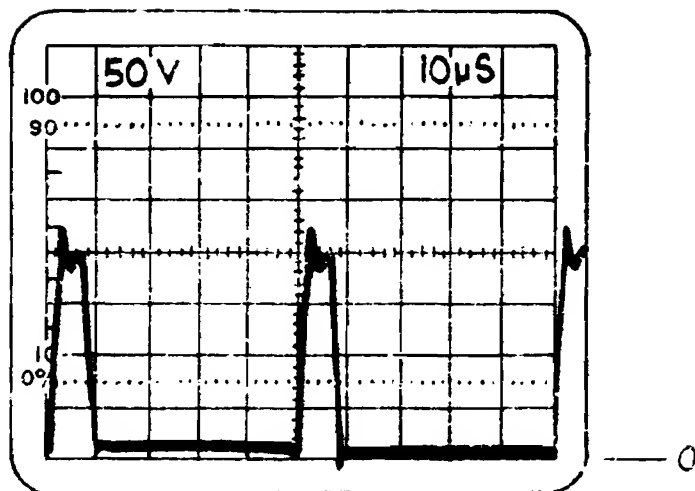
commodore		
PCB WAVEFORMS 12" CRT DISPLAY		
SIZE A	321450	REV A
SCALE NONE	SHEET 9	OF 10

HORIZONTAL (2/2)

17



18




commodore		
PCB WAVEFORMS		
12" CRT DISPLAY		
SIZE	321450	REV
A		A
SCALE	NONE	SHEET 10 OF 10

321447

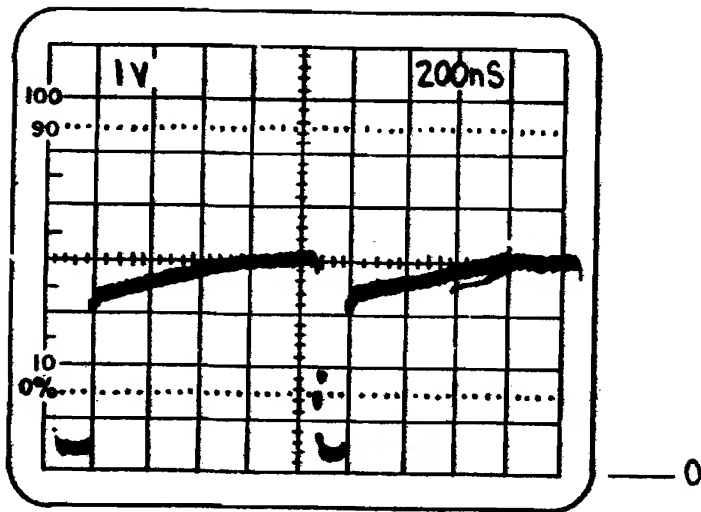
REVISIONS				
LTR	ZONE	DESCRIPTION	DATE	APPROVED
A		PRODUCTION RELEASE	12/29/80	R. Kauter

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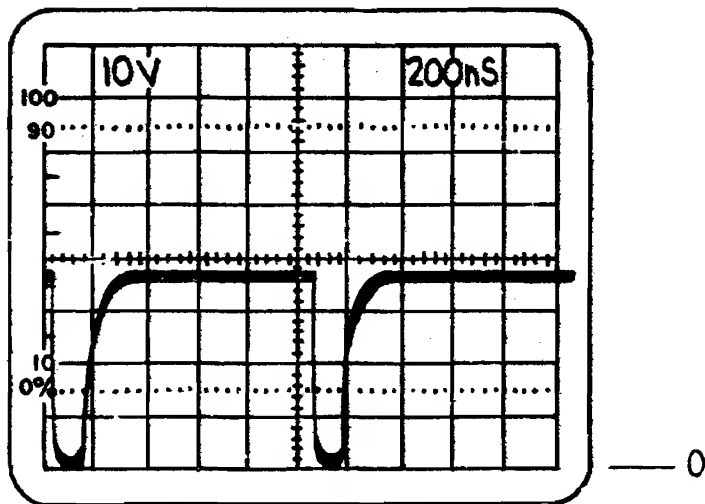
DRAWN BY: <i>W. Lutz</i>	DATE 12-7-80			
CHKD: <i>W. Lutz</i>	12/9/80			
ENGR: <i>C. Kauter</i>	12/29/80	TITLE: PCB WAVEFORMS		
PROD:		9" CRT DISPLAY		
APPD:		SIZE A	DWG NO. 321447	REV A
APPD:		RELEASE DATE	SHEET 1 OF 10	

VIDEO (1/1)

①



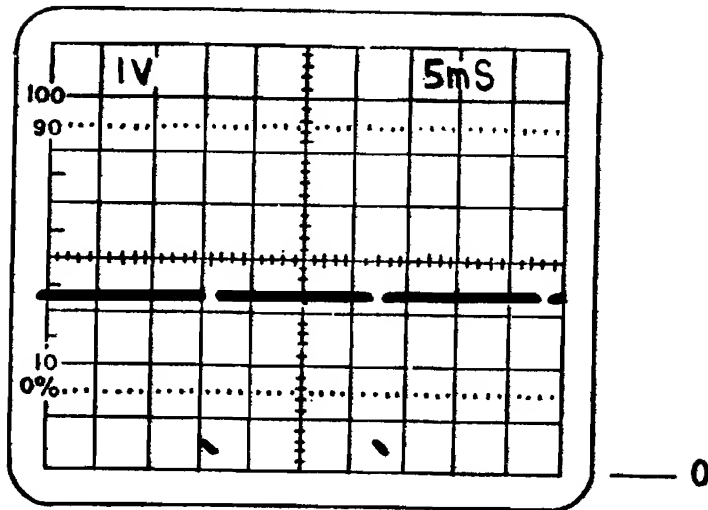
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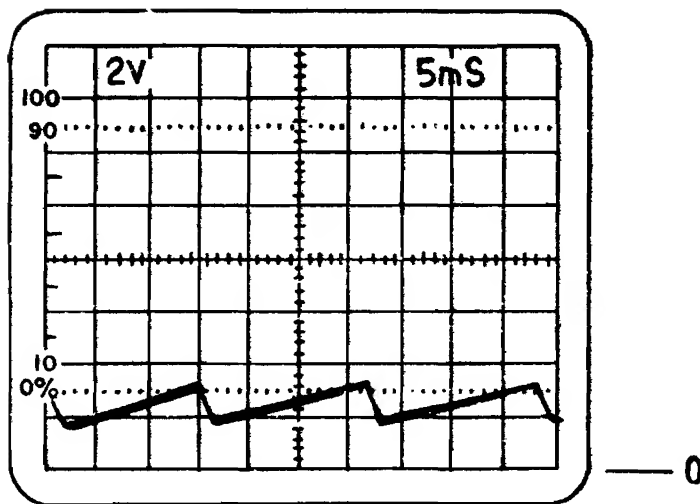
commodore		
PCB WAVEFORMS		
9" CRT DISPLAY		
SIZE A	321447	REV A
SCALE NONE	SHEET 2	OF 10

VERTICAL (1/3)

3



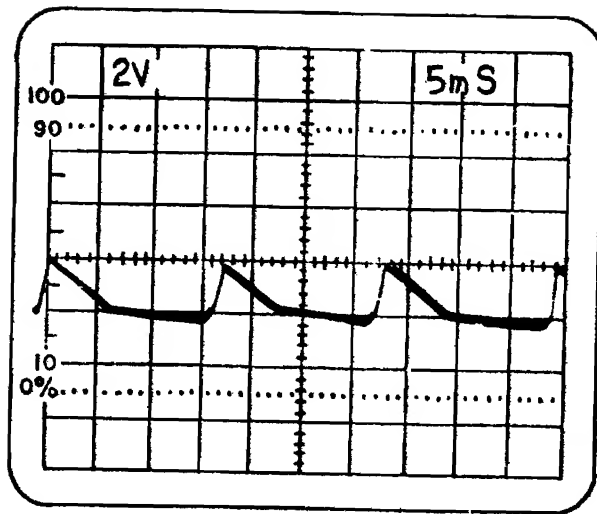
4



commodore		
PCB WAVEFORMS		
9" CRT DISPLAY		
SIZE A	321447	REV A
SCALE NAME	SHEET 3 OF 10	

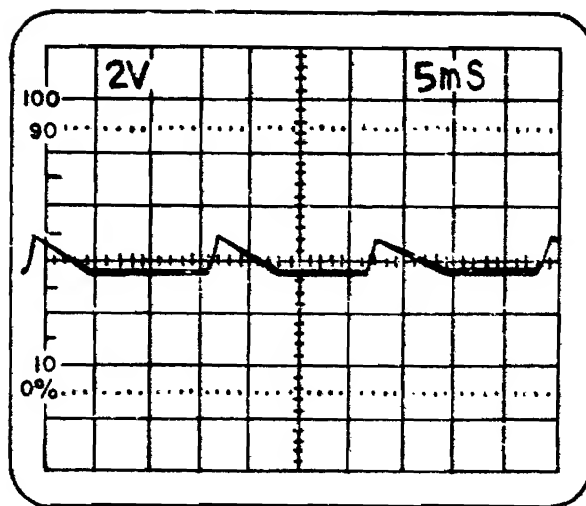
VERTICAL (1/3)

5



0

6



0

commodore

PCB WAVEFORMS
9" CRT DISPLAY

SIZE

A

321447

REV

A

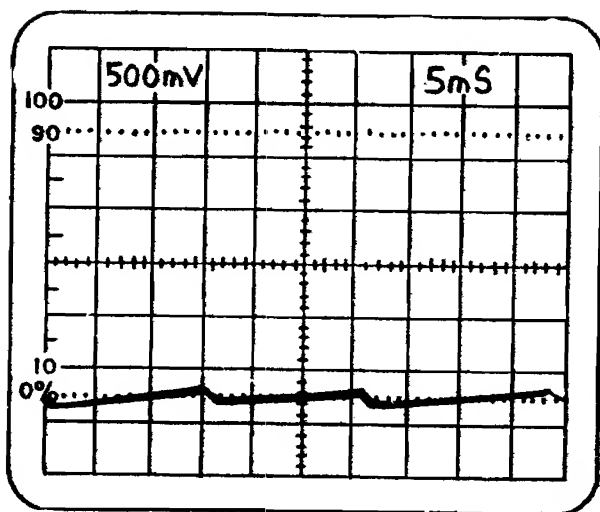
SCALE NONE

SHEET 4

OF 10

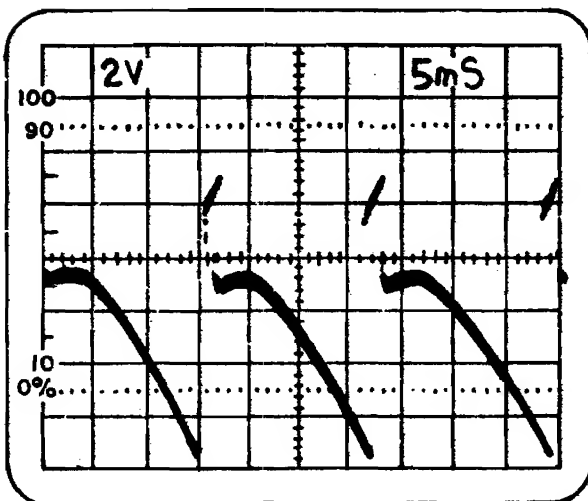
VERTICAL (2/3)

7



— 0

8

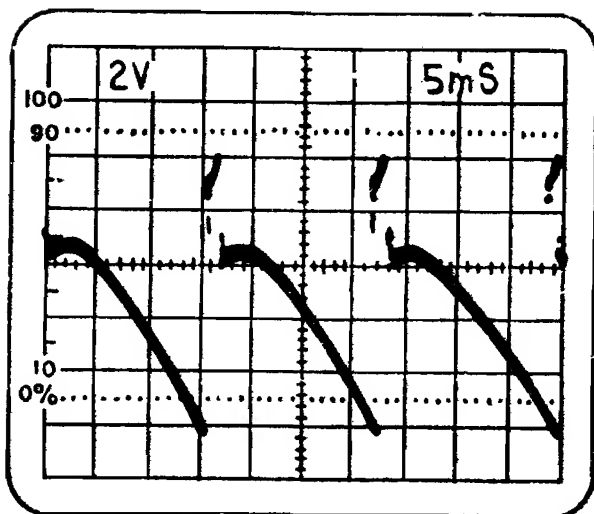


— 0

commodore		
PCB WAVEFORMS		
9" CRT DISPLAY		
SIZE	321447	REV
A		A
SCALE NONE	SHEET 5	OF 10

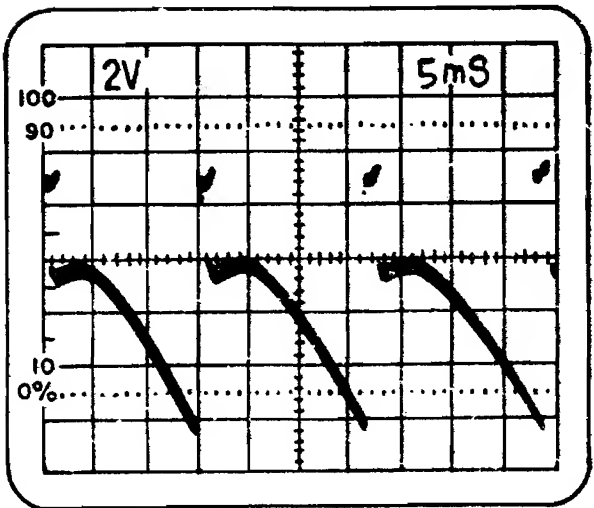
VERTICAL (2/3)

9



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10

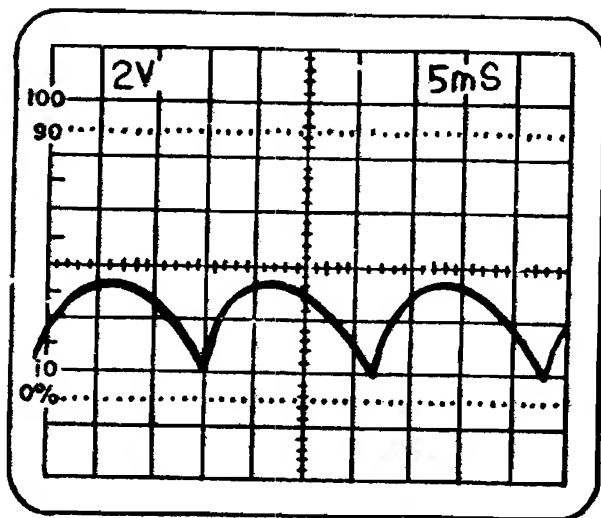


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commodore		
PCB WAVEFORMS		
9" CRT DISPLAY		
SIZE	321447	REV
A		A
SCALE NONE	SHEET 6	OF 10

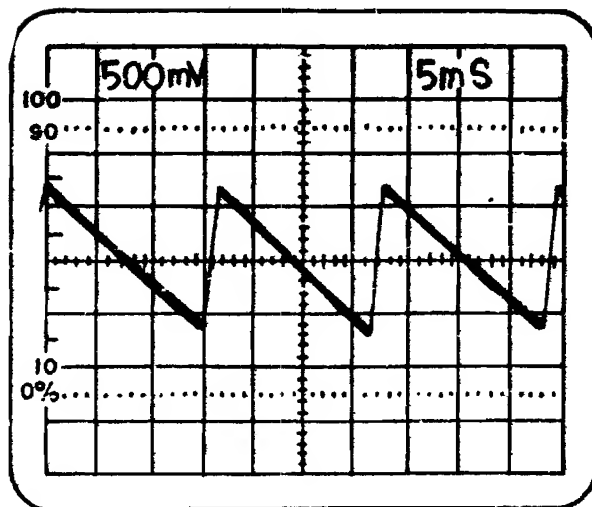
VERTICAL (3/3)

11



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12

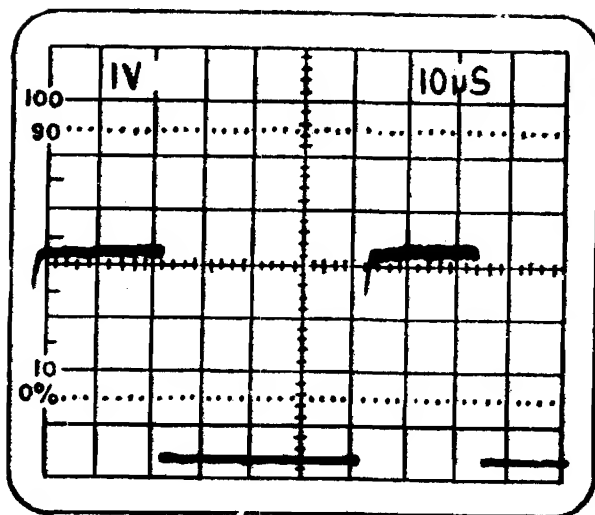


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commodore			
PCB WAVEFORMS			
9" CRT DISPLAY			
SIZE	321447		REV
A			A
SCALE	NONE	SHEET	7 OF 10

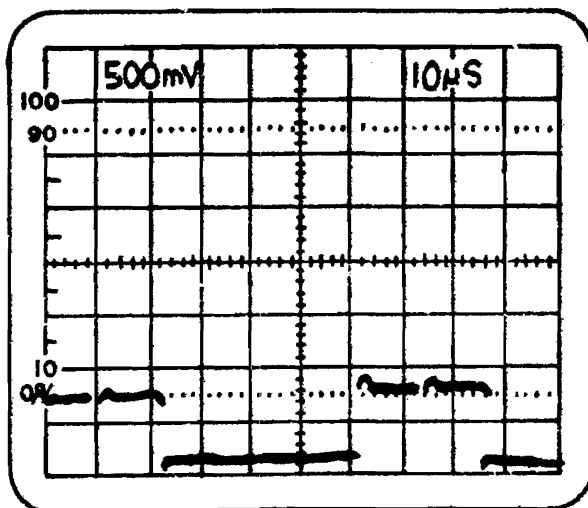
HORIZONTAL (1/2)

13



— 0

14

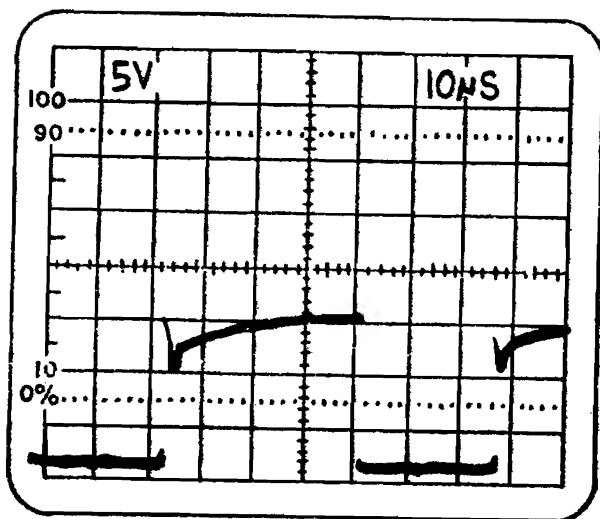


— 0

commodore		
PCB WAVEFORMS 9" CRT DISPLAY		
SIZE A	32447	REV A
SCALE NONE	SHEET 8	OF 10

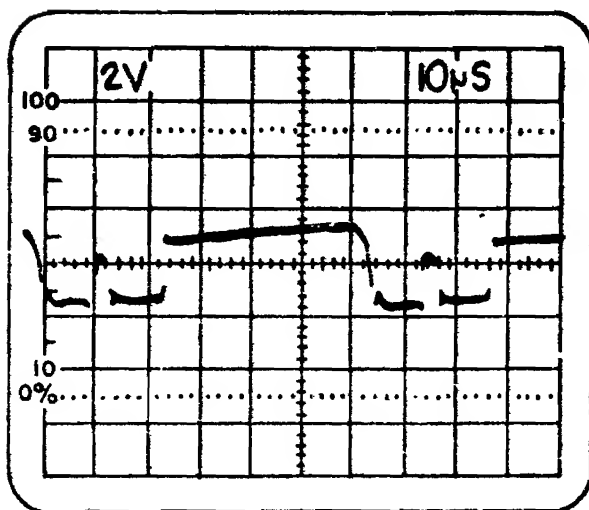
HORIZONTAL (1/2)

15



0

16



0

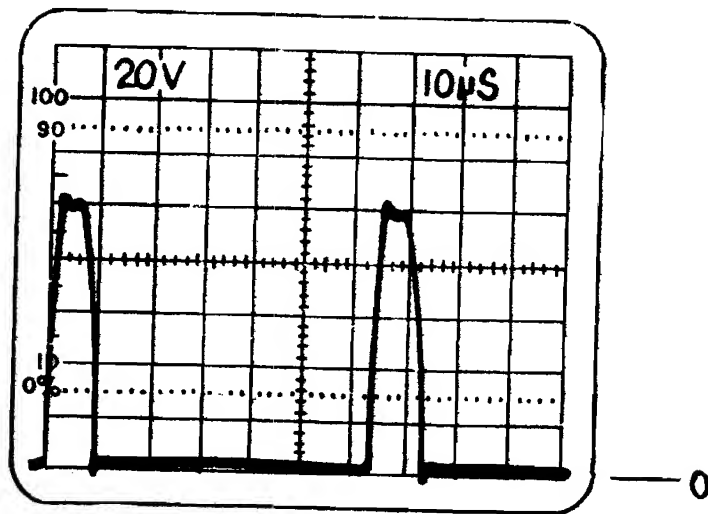
commodore

PCB WAVEFORMS
9" CRT DISPLAY

SIZE	A	321447	REV	A
SCALE	NONE	SHEET	9	OF 10

HORIZONTAL (1/2)

17



commodore		
PCB WAVEFORMS 9" CRT DISPLAY		
SIZE A	321447	REV A
SCALE NONE	SHEET 10 OF 10	

PART NO.		DESCRIPTION		REVISIONS			
		LTR	ZONE	DESCRIPTION	DATE	APPROVED	
320351-01	DYNAMIC PET P.C.B. ASSY, 16 K GRAPHIC	AG		REVISED & REDRAWN PER ECO 1850	9/29/80	[Signature]	
-02	32 K GRAPHIC	AH		REVISED PER ECO 1898	11/1/80	[Signature]	
-03	16 K BUSINESS	AJ		REVISED PER ECO 1920	12/8/80	[Signature]	
-04	32 K BUSINESS	AK		REVISED PER ECO 1928	12/8/80	[Signature]	
-05	DYNAMIC PET P.C.B. ASSY, 8 K GRAPHIC	AL		REVISED PER ECO 2001	1/21/81	[Signature]	
-06	DYNAMIC PET P.C.B. ASSY, 8 K GRAPHIC WITH INTERNAL CASSETTE						
-07	DYNAMIC PET P.C.B. ASSY, 16 K GRAPHIC						
-08	32 K GRAPHIC						
-09	16 K BUSINESS						
-10	32 K BUSINESS						
-11	DYNAMIC PET P.C.B. ASSY, 8 K GRAPHIC						
320351-12	DYNAMIC PET P.C.B. ASSY, 8 K GRAPHIC WITH INTERNAL CASSETTE						

7 IDENTIFY WITH COMMODORE PART NO. & APPLICABLE DASH NO. LOCATE APPROX AS SHOWN.

6 WHEN SHUNTS ARE OMITTED SUBSTITUTE JUMPER WIRE PREPARED PER DETAIL C, IN LOCATIONS SHOWN IN DETAIL A & D. THREE JUMPERS PER SH1 LOCATION, SIX JUMPERS PER SH2 LOCATION.

5 OMIT ON -05,-06,-11 & -12 CONFIGURATIONS ONLY.

4 ITEM 107 MAY BE SUBSTITUTED FOR ITEM 106; HOWEVER, PARTS SHALL NOT BE MIXED.

3. 54XXX, 54\$XXX AND 54L\$XXX MAY BE SUBSTITUTED FOR 74XXX, 74\$XXX AND 74L\$XXX.

2 USE BUSINESS ROM AT UD8.

1 USE GRAPHIC ROM AT UD8.

NOTES-UNLESS OTHERWISE SPECIFIED:

7 IDENTIFY WITH COMMODORE PART NO. & APPLICABLE DASH NO. LOCATE APPROX AS SHOWN.

6 WHEN SHUNTS ARE OMITTED SUBSTITUTE JUMPER WIRE PREPARED PER DETAIL C, IN LOCATIONS SHOWN IN DETAIL A & D. THREE JUMPERS PER SH1 LOCATION, SIX JUMPERS PER SH2 LOCATION.

5 OMIT ON -05,-06,-11 & -12 CONFIGURATIONS ONLY.

4 ITEM 107 MAY BE SUBSTITUTED FOR ITEM 106; HOWEVER, PARTS SHALL NOT BE MIXED.

3. 54XXX, 54\$XXX AND 54L\$XXX MAY BE SUBSTITUTED FOR 74XXX, 74\$XXX AND 74L\$XXX.

2 USE BUSINESS ROM AT UD8.

1 USE GRAPHIC ROM AT UD8.

NOTES-UNLESS OTHERWISE SPECIFIED:

SHEET 6 OF 6 SIDE D ASSY DWG

commodore

TITLE		DYNAMIC PET PC BOARD ASSY		DRAWN BY		G. CARROLL		DATE		1-16-79		ENGR D. GARD		1-18-79		SIZE		B		DRAWING NUMBER		320351	
				CHKD		B. SEILER						APPR		T. WATA						SHEET		OF 6	

QUANTITY REQD PER PART / DASH NO.										ITEM	QTY	PART NUMBER	DESCRIPTION	REF DES	BEND	NOTES	
12	11	10	09	08	07	06	05	04	03								
1	1	1	1	1	1	1	1	1	1	1	D	320350-01	P.C. BOARD DYNAMIC PET				
1	1	1	1	1	1	1	1	1	1	2	D	320349-01	LOGIC DIAGRAM				
1	1	1	1	1	1	1	1	1	1	3	B	90435-01	IC 6502 MPU	UC4			
2	2	2	2	2	2	2	2	2	2	4	B	90436-01	IC 6520 PIA	UC6 UC7			
1	1	1	1	1	1	1	1	1	1	5	B	901437-01	6822 VIA	UC5			
2	2	2	2	2	2	2	2	2	2	6	B	901522-03	74177 BINARY PRESETTABLE COUNT.	UF2,UF4			
1	1	1	1	1	1	1	1	1	1	7	B	901522-01	7417 HEX BUFFER	UA10			
1	1	1	1	1	1	1	1	1	1	8	B	901522-20	7425 NAND GATE	UB2			
1	1	1	1	1	1	1	1	1	1	10	B	901521-09	74LS145 BCD-TO-DECIMAL DECODERS	UC9			
1	1	1	1	1	1	1	1	1	1	11	B	901522-21	74191 SYNC COUNTER	UG5			
1	1	1	1	1	1	1	1	1	1	12	B	901522-13	74154 4 TO 16 LINE DECODERS	UD2			
1	1	1	1	1	1	1	1	1	1	13	B	901522-04	7400 NAND GATE	UG10			
										14							
3	3	3	3	3	3	3	3	3	3	15	B	901525-09	74574 FLIP-FLOP	UH1,UG8,UG9		ITEM 113 MAY BE USED AS A SUBSTITUTE	
2	2	2	2	2	2	2	2	2	2	16	B	901525-01	74504 SCHOTTKY HEX INV.	UI1,UI2			
1	1	1	1	1	1	1	1	1	1	17	B	901521-03	74LS08 AND GATE	UG1		ITEM 114 MAY BE USED AS A SUBSTITUTE	
2	2	2	2	2	2	2	2	2	2	18	B	901521-01	74LS00 NAND GATE	UH4,UH5			
1	1	1	1	1	1	1	1	1	1	19	B	901521-02	74LS04 HEX INV.	UA3			
2	2	2	2	2	2	2	2	2	2	20	B	901521-03	74LS08 AND GATE	UH0,UF1			
2	2	2	2	2	2	2	2	2	2	21	B	901521-24	74LS10 NAND GATE	UAS,UG7			
2	2	2	2	2	2	2	2	2	2	22	B	901521-04	74LS20 NAND GATE	UG2,UG11			
2	2	2	2	2	2	2	2	2	2	23	B	901521-07	74LS93 COUNTER	UH9,UH11			
										24							
4	4	4	4	4	4	4	4	4	4	25	B	901521-08	74LS107 FLIP-FLOP	UG6,UG6			
4	4	4	4	4	4	4	4	4	4	26	B	901521-11	74LS157 DATA SEL	UH7,UH8			
																ITEM 111 MAY BE USED AS A SUBSTITUTE	
1	1	1	1	1	1	1	1	1	1	27	B	901521-25	74LS164 8-BIT PARALLEL COUNTER	UH3			
1	1	1	1	1	1	1	1	1	1	28	B	901521-12	74LS165 SHIFT REG.	UE11		ITEM 112 MAY BE USED AS A SUBSTITUTE	
8	8	8	8	8	8	8	8	8	8	29	B	901521-13	74LS244 BUFFER	UB3,UC3			
														UE7,UE8			
														UE7,UE10			
														UI10,UI11			
4	4	4	4	4	4	4	4	4	4	30	B	901522-26	74LS153 DATA SELECTOR MULTIPLEX.	UE3-UE6			
2	2	2	2	2	2	2	2	2	2	31	B	901521-29	74LS173 OCTAL D-TYPE LATCH	UF9,UG3			
commodore										TITLE: DYNAMIC PET PC BOARD ASSEMBLY		CHKD: DRN BY: APPR:		DATE: SIZE: 8		320351	R. SHI AL 2/6

QUANTITY REQD. PER PART / DASH NO.										ITEM	PART NUMBER	DESCRIPTION	REF DES	REMARKS	NOTES
12	11	10	9	8	7	6	5	4	3						
2	2	2	2	2	2	2	2	2	2	32	B	IC RAM 4K STATIC	UF7,UF8		400 N SEC
-	8	8	8	-	-	8	8	8	33	B		4116 RAM 16K DYNAMIC	UI2-UI9		SEE ITEM 108 OR 109 FOR SUBSTITUTE
-	8	8	-	-	8	-	8	-	33	B		4116 RAM 16K DYNAMIC	UI2-UI9		
1	1	1	1	1	1	1	1	1	1	3A	B	6316-004 ROM (CHAR. GEN.)	UF10		
-	-	-	-	-	-	-	-	-	-	35	B	6316-011 ROM (ECCO-ETEE)	UD8		1
-	-	-	-	-	-	-	-	-	-	36	B	6332-001 ROM (ECCO-CFF)	UD6		
-	-	-	-	-	-	-	-	-	-	37	B	6332-008 ROM (ECCO-DFF)	UD1		
-	-	-	-	-	-	-	-	-	-	38	B	6332-009 ROM (ECCO-FFF)	UD9		
-	-	-	-	-	-	-	-	-	-	39	B	6316-024 ROM (CHAR. GEN.)	UD8		2
1	1	1	1	1	1	1	1	1	1	40	B	LM555 TIMER	UA7		
3	3	3	3	3	3	3	3	3	3	41	B	MC 3446 INTFC BUS	UA7-UA9		
										42					
3	3	3	3	3	3	3	3	3	3	43	B	CAPACITOR CERAMIC 0.01UF 50V	CG6,CG7,10		
2	2	2	2	2	2	2	2	2	2	44	B	CERAMIC 002UF 200V	CGA,CG5		
1	1	1	1	1	1	1	1	1	1	45	B	POLY. FILM 0.1 UF 100V	CG8		
1	1	1	1	1	1	1	1	1	1	46	B	CERAMIC 22 PF 200V	CG4		
1	1	1	1	1	1	1	1	1	1	47	B	ELECT. 470UF 16V	CG3		
3	3	3	3	3	3	3	3	3	3	48	B	ELECT. 47UF 16V	CA,16,24		
1	1	1	1	1	1	1	1	1	1	49	B	ELECT. 4700UF 25V	CG2		
5	5	6	6	6	6	5	5	6	6	50	B	DIPPED CERAMIC 0.1UF 50V	CI-C13		5 SEE SH 6 ASSY DRAWING
													CI8-C23		
													CG2-C31		
													C33-C40		
													CA7-CG1		
													CT1-C80		
													CG5-C93		
4	4	4	4	4	4	4	4	4	4	51	B	TANT. 10UF 25V	CF5,17,25,67		
9	9	9	9	9	9	9	9	9	9	52	B	CAPACITOR, ELEC.	CF2,CF1,CF2,CF3,CF4,CF5		SEE ITEM 99 FOR SUBSTITUTE
													CF1-C84		
4	4	4	4	4	4	4	4	4	4	53	B	DIODE 1N4001 1A/50V	CR10-13		SEE ITEM 56 FOR SUBSTITUTE
9	9	9	9	9	9	9	9	9	9	54	B	IN 5402 3A/200V	CR1-9		
2	2	2	2	2	2	2	2	2	2	55	B	ZENER 7.5	VR1,2		
5	5	5	5	5	5	5	5	5	5	56	B	DIODE 1N4005	CR10-13		SUBSTITUTE FOR ITEM 53
2	2	2	2	2	2	2	2	2	2	57	B	RESISTOR 1/4W 5% 1.5K OHMS	R1, R4		
10	10	10	10	10	10	10	10	10	10	58	B	" " 10K OHMS	R2, R6		
													R18-R25		
commadore										TITLE: DYNAMIC PET P.C. BOARD ASSEMBLY					
										DRAWN BY: []		CHECKED: []		APPROVED: []	
										DATE: []		SIZE: B		REV: 320351	
										SHEET: 3		REV: 3		REV: 3	

QUANTITY REQD. PER PART / DASH NO.										3	8	PART NUMBER	DESCRIPTION	REF DES	BND	NOTES
12	11	10	09	08	07	06	05	04	03							
14	14	14	14	14	14	14	14	14	14	57	B	901550-01	RESISTOR 1/4W 5% 1K OHMS	R3, R5, R17, R1A, R27, R40, R49-R51, R15, R16, R10, R48		
2	2	2	2	2	2	2	2	2	2	60	B	901550-84	1M			
2	2	2	2	2	2	2	2	2	2	61	B	901550-85	24K			
2	2	2	2	2	2	2	2	2	2	62	B					
2	2	2	2	2	2	2	2	2	2	63	B	901550-90	27	R41, R42		
1	1	1	1	1	1	1	1	1	1	64	B	901550-02	3.3K	R17		
1	1	1	1	1	1	1	1	1	1	65	B	901550-93	39	R39		
4	4	4	4	4	4	4	4	4	4	66	B	901550-58	470	R26, R28, R29, R30		
8	8	8	8	8	8	8	8	8	8	67	B	901550-94	65	R31-R38		
2	2	2	2	2	2	2	2	2	2	68	B	901550-03	5.1K	R11, R47		
2	2	2	2	2	2	2	2	2	2	69	B	901550-76	RESISTOR 1/4W 5% 270 OHMS	R7, R8		
2	2	2	2	2	2	2	2	2	2	70	B	902658-01	TRANSISTOR NPN 2N3904	Q3, Q6		
2	2	2	2	2	2	2	2	2	2	71	B	902652-01	" NPN 2N4401	Q2, Q5		
2	2	2	2	2	2	2	2	2	2	72	B	902653-01	TRANSISTOR NPN TIP29	Q1, Q4		
1	1	1	1	1	1	1	1	1	1	73	B					
1	1	1	1	1	1	1	1	1	1	74	B	901528-04	VOLT. REG. 7812 +12V / 1A TO-3	VR5		
1	1	1	1	1	1	1	1	1	1	75	B	901529-03	" 7805 -5V / 1A TO-220	VR6		
2	2	2	2	2	2	2	2	2	2	76	B	901528-03	VOLT. REG. LM 340-5 +5V 1.5A TO-3	VR3, VR4		FOR SUBSTITUTE SEE ITEM 77
5	5	5	5	5	5	5	5	5	5	77	B	901528-01	VOLT. REG. LM 323	VR3, VR4		SUBSTITUTE FOR ITEM 76
1	1	1	1	1	1	1	1	1	1	78	B	904777-10	DIP SHUNT 10 PACK	SH2	6	
1	1	1	1	1	1	1	1	1	1	79	B	904777-06	DIP SHUNT 6 PACK	SH1	6	
5	5	5	5	5	5	5	5	5	5	80	B	320086-02	JUMPER	SH1, SH2	6	
1	1	1	1	1	1	1	1	1	1	81	B	903331-20	HEADER ASSY, POLARIZED, (.100) 20 PIN	J5		SEE ITEM 117 FOR SUBSTITUTE
1	1	1	1	1	1	1	1	1	1	82	B	903331-07	" POLARIZED, (.100) 7 PIN	J11		SEE ITEM 118 FOR SUB. PIN 2 OMITTED, REMOVE PIN 3 AT ASSY
1	1	1	1	1	1	1	1	1	1	83	B	903326-07	" (.100) 7 PIN	J10		SEE ITEM 119 FOR SUB. REMOVE PIN 3 AT ASSY
1	1	1	1	1	1	1	1	1	1	84	B	903331-07	" POLARIZED, (.100) 7 PIN	J7		SEE ITEM 120 FOR SUB. ORIENT OMITTED PIN TO POSITION PIN 6
1	1	1	1	1	1	1	1	1	1	85	B	903316-09	HEADER ASSY (.156) 9 PIN	J8		SEE ITEM 121 FOR SUB. REMOVE PIN 7 AT ASSY
2	2	2	2	2	2	2	2	2	2	86	B	903345-25	HEADER ASSY, POST, STRAIGHT, 100 CENTERS	J4, J9		50 PIN
1	1	1	1	1	1	1	1	1	1	87	B					
1	1	1	1	1	1	1	1	1	1	88	B					
4	4	4	4	4	4	4	4	4	4	89	B	904150-04	IC SOCKET 24 PIN	UD3-UD9, U10		SEE ITEM 90 FOR SUBSTITUTE
5	5	5	5	5	5	5	5	5	5	90	B	904153-04	IC SOCKET 24 PIN	UD3-UD9, U10		SUBSTITUTE FOR ITEM 89

commodore

DYNAMIC PET PC. BOARD ASSEMBLY

CHKD:

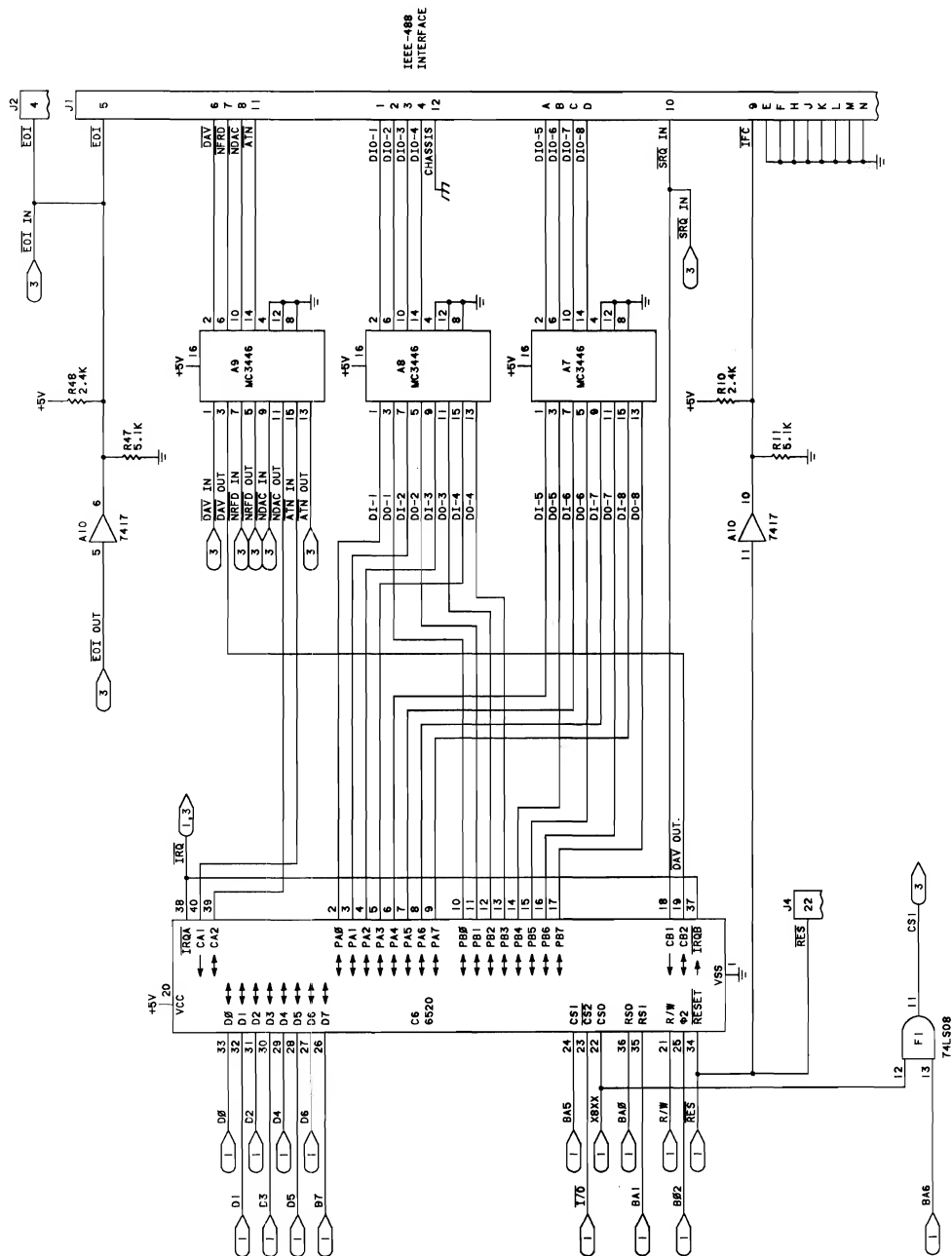
ENGR:

SIZE

320 351

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REVIEWS		DATE	APPROVED
BY	DESCRIPTION		
LYN JONE	SEE SHEET 1		

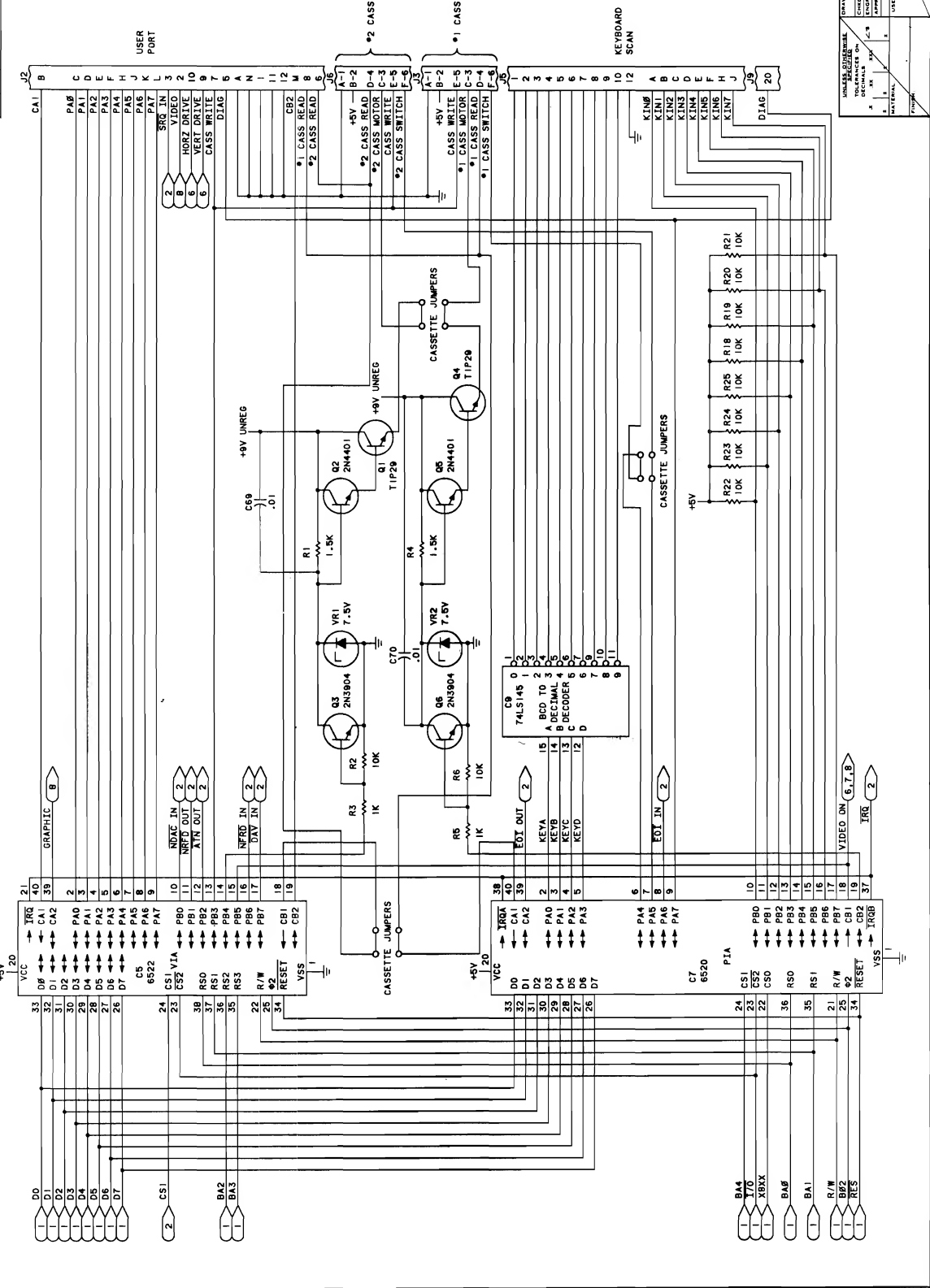


DESIGNED BY		DATE	APPROVED
BY	DESCRIPTION		
LYN JONE	SEE SHEET 1		

commodore
LOGIC DIAGRAM
DYNAMIC PER
IEEE-488 INTERFACE

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REVISIONS		DATE	APPROVED
LYN	ZONE		
DESCRIPTION			
SEE SHEET 1			

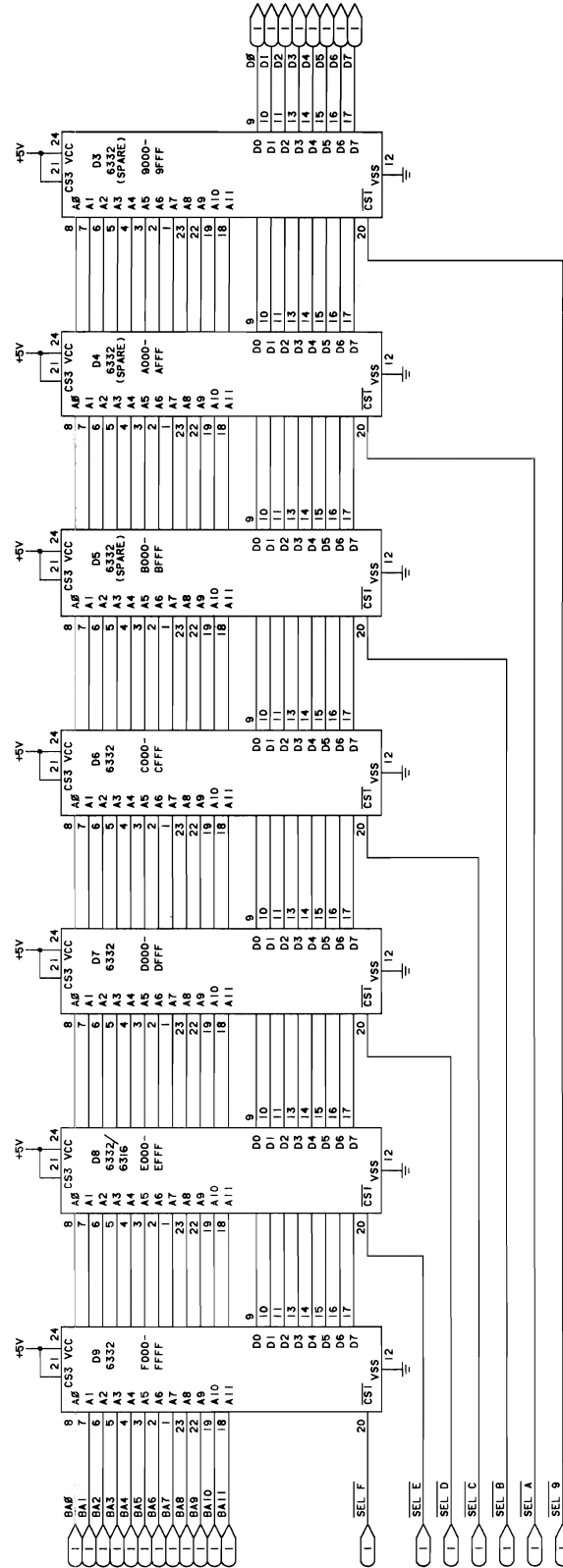


UNIVERSITY MICROFILMS		DATE	
SERIALS ACQUISITION		DATE	
TOLERANCES ON		DATE	
VALUES		DATE	
RESISTORS		DATE	
CAPACITORS		DATE	
MATERIAL		DATE	
PAGE		DATE	

commodore		DATE	
LOGIC DIAGRAM		DATE	
DYNAMIC PET		DATE	
CASSETTE B KEYBOARD		DATE	
D		DATE	
320349		DATE	
SCALE		DATE	
SHEET 3 OF 9		DATE	

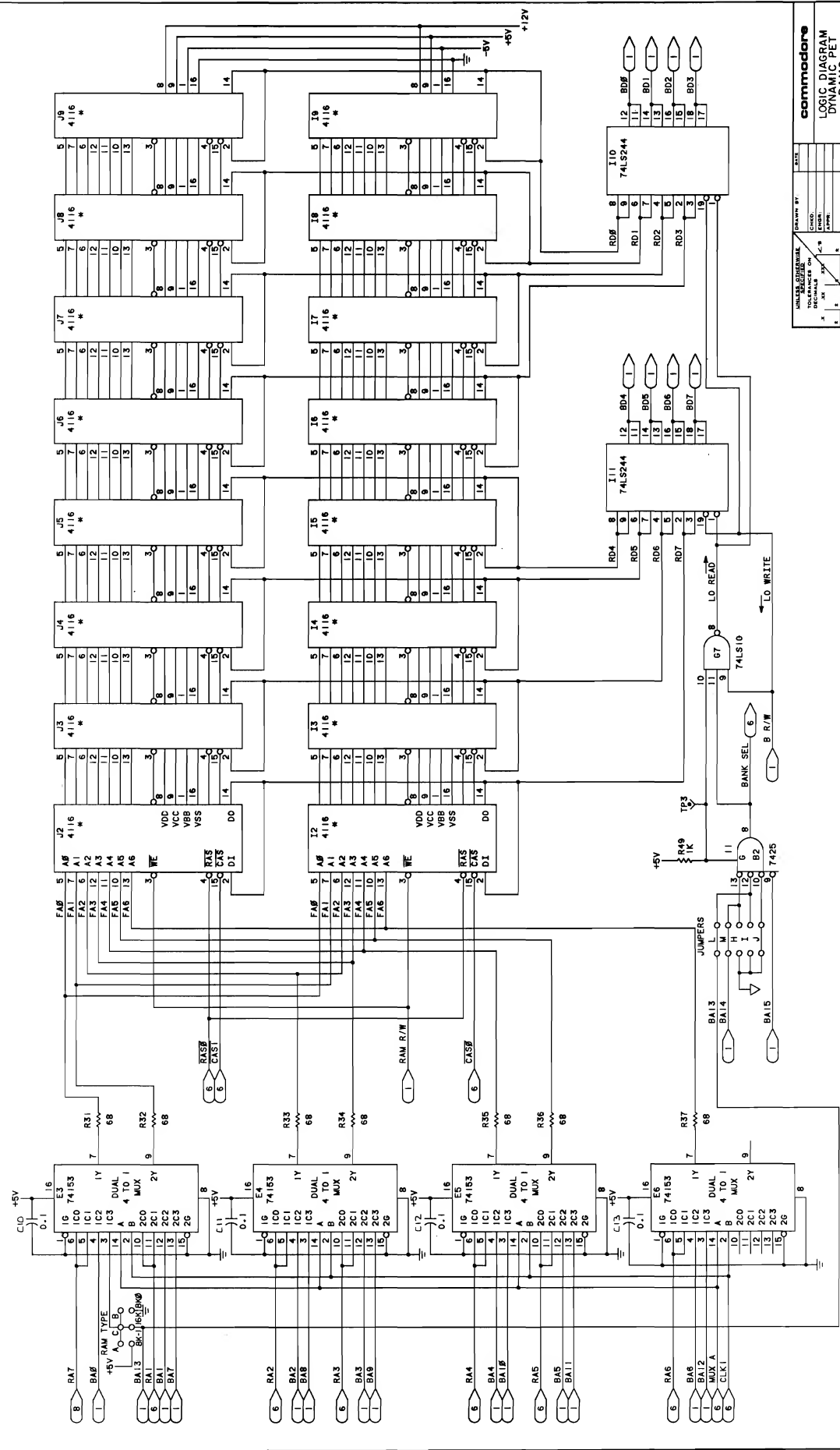
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LYR	ZONE		

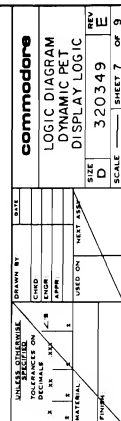
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SEE SHEET 1

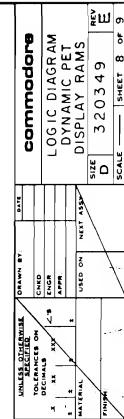


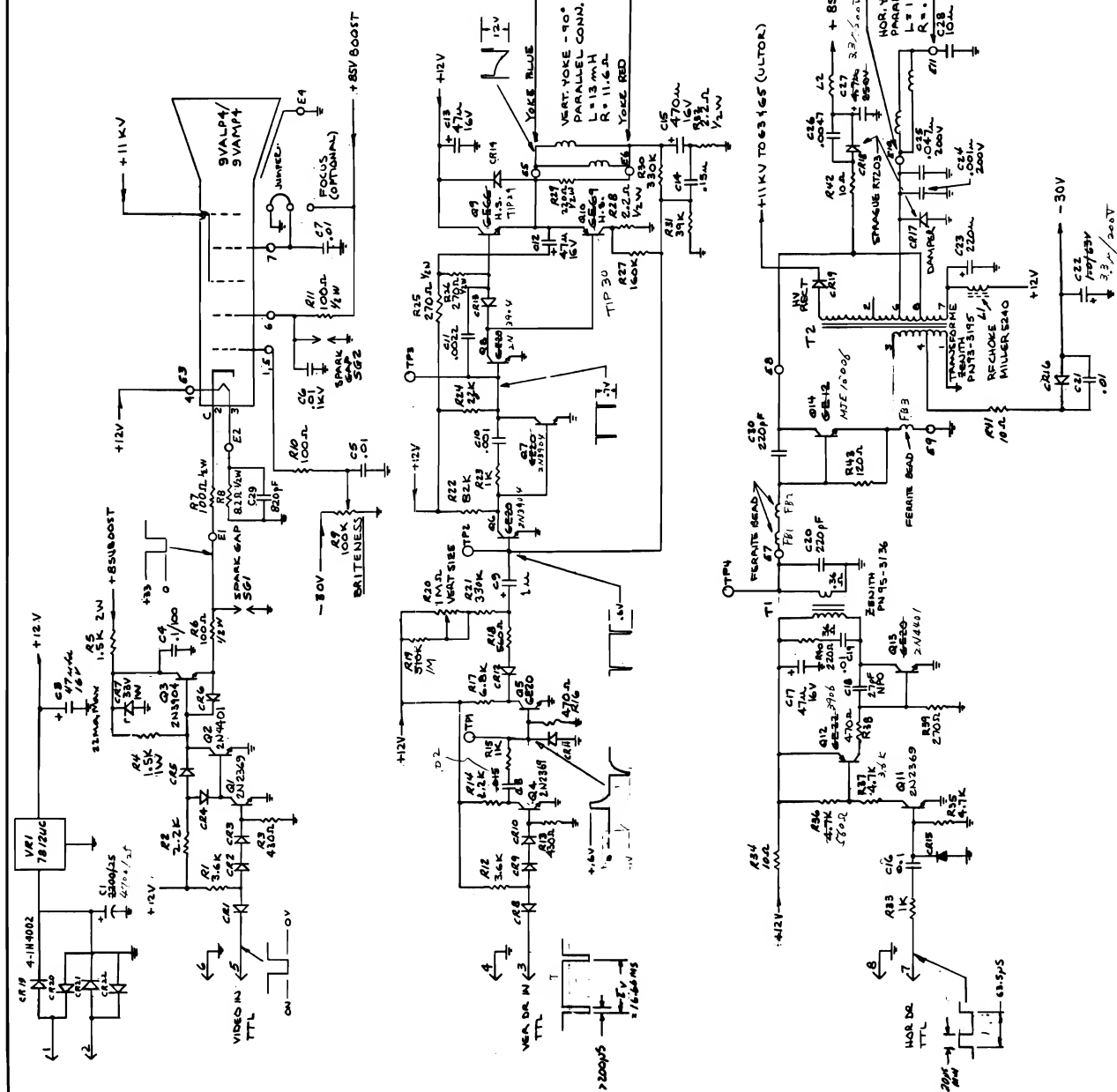
COMMERCIAL		COMMERCIAL	
DESIGNED BY	DATE	DESIGNED BY	DATE
CHECKED		CHECKED	
APPROVED		APPROVED	
USED ON	NET 155	USED ON	NET 155
MATERIAL		MATERIAL	
SCALE		SCALE	
SHEET	4	SHEET	4
OF	9	OF	9

commodore
LOGIC DIAGRAM
DYNAMIC PET
ROMS
D 320349 E









- NOTES:
- 1) R7, SG1, SG2 TO BE LOCATED AT TUBE SOCKET.
 - 2) C30, R43 LOCATED WITH Q14 ON HEAT SINK. FERRITE BEADS ON LEADS CONNECTING TO PCB.
 - 3) BOARD CONNECTOR IS MOLEX PART NO. 09-64-1081.
 - 4) YOKE IS ZENITH PART NO. 95-3214.
 - 5) R9 LOCATED REAR OF PCB 1/4" SHAF BY 2" LONG.
 - 6) R20 MOUNTED PERPENDICULAR TO BOARD. SCREWDRIVER ADJ.

COMMODORE	
DESIGNED BY	APPROVED BY
DATE: 3-9-76	DATE: 3-11-77
DISPLAY SCHEMATIC	
REVISION NUMBER	320032